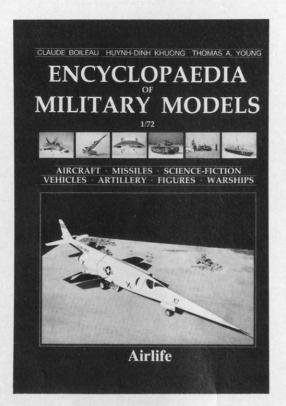


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A Skyhawk crew preparing to launch on a training mission

# LIFTOFF, WE HAVE LIFTOFF

AT the time of writing the space shuttle 'Discovery' and the new Airfix Magazine share the launch date of 24 August. Both the old versions of the magazine and the spacecraft had their problems and by applying a considerable effort NASA and the editorial staff of Airfix hope to have rectified any faults that may have been present in each of our individual past projects. Both of us ceased operations at approximately the same time and both of us have scheduled our respective lift offs on the same day. We sincerely wish NASA the best of luck and hope that all of our own efforts here at Airfix Magazine will direct our circulation figures in the same general direction as the designed course of all spacecraft

Editorially I would like to re-establish our new publication as the leader in the field. In the past Airfix Magazine was indeed at the top of the heap with a circulation of over 100,000 copies per month. During these halcyon days for the magazine the modelling hobby itself went through a bad patch. The magazine was suffering from a high degree of complacency and did not survive the doldrums of the hobby. The plastic modelling hobby is now receiving a new brisk wind from the east and we are setting off on a new course to refresh your interest in the manifold aspects of this enjoyable pastime. The hobby is presently experiencing a genuine rennaissance and it is our duty to spread the word.

The plastic modeller has never had it better. The range and scope of new products is dazzling. The quality of new kits is striving toward a standard that approaches excellence and in most cases achieves it. The variety of cottage industries that are springing up present us with a mind boggling choice of tools and materials to enable modellers of all skill levels to construct truly unique models. We are blessed with the added advantages of the introduction of 'High Tech' to our work areas. The hobby has changed considerably since the last issue of the old Airfix Magazine and we are well aware of this fact. It shall be our stated policy now and in all future issues to introduce the neophite hobbyist to the basic skills and techniques that will permit him to construct a thing of beauty. We also hope to assist the average modeller to become above average.

We will make every effort to display as many of the new products available that we can fit into our pages and tell you where to obtain them in turn saving you the legwork. In our reviews if a specific problem in a new product turns up we won't winge about it, we'll simply show you how to solve it. The name of the game is enjoyment. We at *Airfix Magazine* enjoy the construction and painting of plastic models and treasure seeing the results of our efforts as much as you. We are modellers not talkers.

'Roger Houston, Space Shuttle Airfix passing 20,000 and accelerating to mach 2.0, all systems

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# magazine

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# SEPTEMBER 1988

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# STRAIGHT FROM THE BOX

A TA-4J over the Sierra Nevada range in Northern California. (J.S. Wood)

# THE TWO-SEAT SCOOTER

# James P. Wood describes the TA-4J kit by Fujimi

The McDonnell-Douglas Skyhawk, or Scooter as it is known affectionately by the naval aviators that fly it, has been in service with the US Navy since 1956. The two-seater versions were developed from the A-4E version as the TA-4E which first flew in 1965. It had a 28 inch section added to the fuselage to accommodate the extra seat and flight controls and retained most of the single seaters avionics. During its production it was redesignated as the TA-4F and a total of 239 of this version were produced. A further 292 twoseaters were produced for advanced training duties as the TA-4J and these differed from the 'F' version in that they lacked the sophisticated navigation and attack systems that were not required for the training role. The TA-4 still remains in US Navy and Marine service until this day and is scheduled to continue until well into the 1990's. The training version will be gradually replaced by the McDonnell-Douglas T-45 Seahawk, which is a licence built and navalised BAE Hawk. For a more comprehensive history of the Skyhawk, refer to our sister publication Scale Aircraft Modelling Volume 10, Number 2.

The Fujimi 1:72 scale TA-4J/F kit which was released earlier this year is the subject of this article and it is representative of the current 'state of the art' in plastic models. The kit con-

tains no less than 94 white and clear crisply moulded plastic parts and excellent waterslide transfers for four different markings are included. The kit itself is another of those remarkably well engineered products from Fujimi that take all the sweat

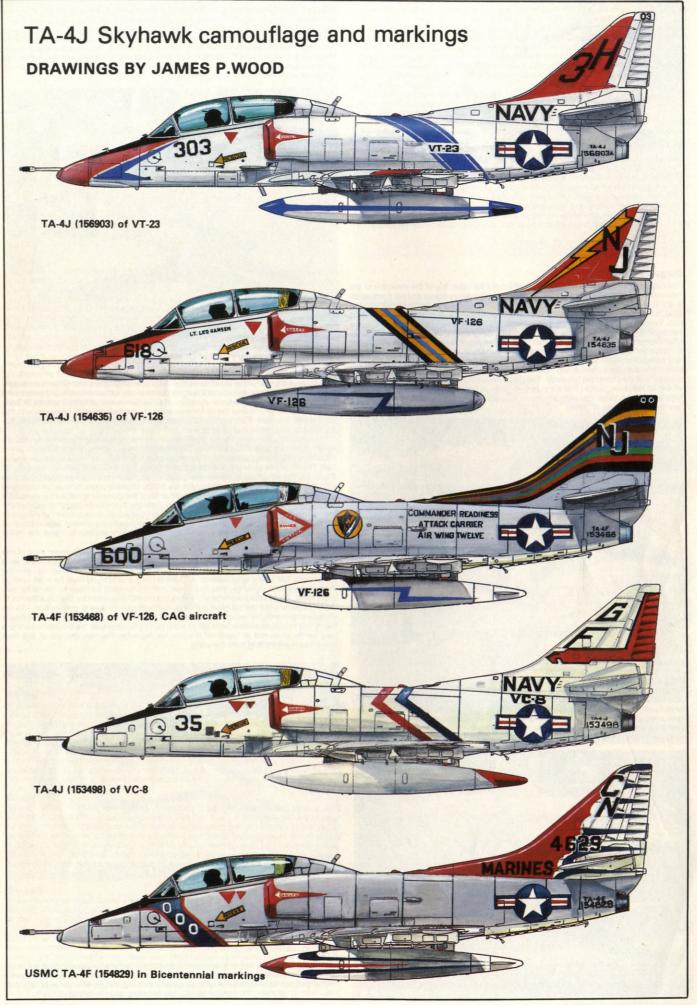
and guesswork out of scale modelling that we have become so accustomed to. The now tried and true routine of taking a basic prototype model and designing a whole range of variants marketed in the variety of sub-types in which it was originally manufactured has made life for us modellers a dream come true. No more balsa wood and talcum powder filler to mess with, all the research and headaches are assumed by the people who produce the kits. They cost a bit more but are worth every penny of

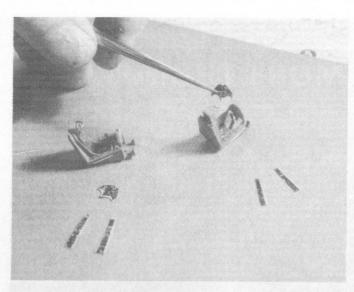
the added price

The construction of this little gem is simple and straightforward and by following the concise and easy to understand instruction sheet you should have no problems achieving a satisfactory result. The suggestions that follow will help the less experienced modeller avoid any traps that might naturally occur to anyone with limited abilities. The steps are numbered to coincide with those on the kits instruction sheet.

A Marine TA-4F in a revetment at Ton San Nhut airfield, Saigon after a diversionary landing. The aircraft suffered some hits from ground fire and the canopy is missing.

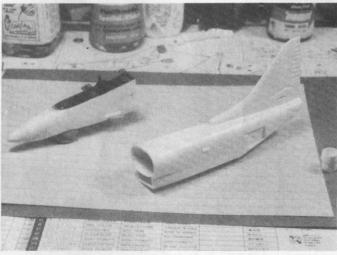






### Stage 1.

This stage is broken down into 1A and 1B which are the assembly of the assembly of the two cockpits. I painted the two assemblies a matt medium grey colour and left these aside to dry. It would be a good idea, while you have the tin already open and the paint brush in hand, to also paint the inside of parts 22 and 23 and set them aside to be ready for the next step. When the two cockpits were dry, I painted the following details: the seat cushions a matt light olive green to represent the fabric and the top of the control column a matt black. After the seat cushions had dried, I then painted some matt dark green lines on the seats and shoulder harnesses. I also added a miniscule drop of silver to the ends of all these straps to stimulate the metal connection hardware. The transfer sheet contains six parts for the instrument and side panels which I located after having first trimmed them with a pair of scissors to fit the plastic parts exactly. The clear film surrounding the decal, if permitted to remain on the decal, would make it extremely difficult to apply. When all of the above is completed, it provides you with a miniature cockpit that will look quite good with the



This step should be started only after the paint is completely dry. Install the two cockpits, I used super-glue, and the nose wheel well to one fuselage side only after scraping any surplus paint off the surfaces to which the glue is to be applied. Although this model will sit on its nosewheel without any added weight, I always add a little plasticene and lead to insure that a jarred shelf won't leave all my models sitting on their tails. When all of this has



### Stage 3.

First paint the compressor blades a metalic colour, I used Humbrol steel, and then glue parts 67 and 68 to the inside of the circle around the compressor. I feel that the inclusion of the exhaust pipe at this stage is a bit premature though it is advisable to paint it a dark metalic colour at this time. To install the painted exhaust at this stage would be to permit the risk of getting the basic airiram colour on it and therefore require repainting at a later stage. Glue the compressor assembly to one side of the aft fuselage and then glue the two halves together. Don't forget to remove the little pointed ECM (Electronic Counter-

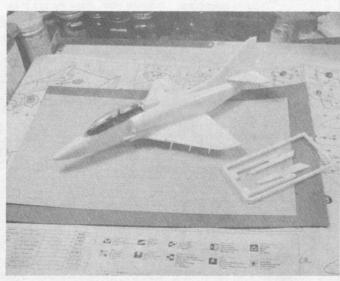


### Stage 4.

This stage is the gathering together of the major sub-assemblies and while it is not particularly difficult, it is critical. It is at this point that you may well wish that Fujimi were a trifle less imaginative in their products. A review of an earlier version of this kit printed in Scale Aircraft Modelling criticised the kit for posessing an unsatisfactory fit. I disagree with this contention, however, it is imperative to point out that extreme care must be exercised during this stage to insure that all goes well.

Take note of the two additional boxes drawn on the instructions that point out the op-tions that are available at this juncture. The smaller of the two shows you that if you want to include part 42 later in the assembly, you must drill a tiny hole in the inside of the lower wing half. The other box gives you the opportunity to provide your Skyhawk with the option of displaying the wing flaps in the lowered position. Skyhawks are often seen on the tarmac with their flaps fully down though not always, so the choice is yours. Should you decide to take the option, simply score the flap on both sides of the lower wing half with a sharp craft knife until it is separated from the trailing edge. Take great care when applying your knife to the rear portion of the under -carriage fairing. The flaps will require a further trimming to fit when you install them later in Stage 7. It is a good idea to paint the severed flaps at this time so as to give them adequate time to dry before their installation. Paint the inside surface red and the outside white.

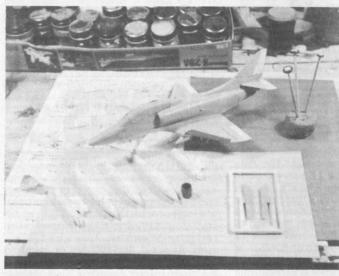
To begin the assembly of these three sub-assemblies, decide which under wing stores that you want to include and drill the necessary holes through the inside of the lower wing half. Glue the two upper wing halves to the lower and set aside to dry. When dry, glue the aft fuselage half to the wing assembly. This next part is where you must be most careful. With the greatest patience, you must now add the forward fuselage to the other two assemblies. If you take your time and insure the correct alignment by tiny adjustments to the three parts while the adhesive is drying, it should be a 'no sweat' proposition. I found the kit's engineering to be superband it required absolutely no filler. Now that your model is beginning to look less like a mere pile of small parts you must take the trouble to handle it very gently so as not to break off the tiny leading edge flap rails that are at this time iously protruding from the wing



Make up your mind whether to show off the cockpit interior or not and choose either the open or closed canpoy option as two canopies are included. Paint the glare shield over the instrument panel matt black and when dry, add the clear gunsight reflector (part 120). Add the intake assemblies, the canopy fairing, the fin fairing and the tailplanes



Stage 6
You have several options available during this stage and we shall consider them one by one The speed brakes on the aft fuselage may be either shown open or closed. This is a tricky one for the beginner and if you don't have a lot of modelling experience you should probably glue them in the closed position. This will save you grief later when applying the national insignia decals which have to be cut to fit over the brakes. If it is decided to show them in the opened position, remember to paint the inside of the brakes and the brake wells red. The actuators, (parts 54) should be painted an aluminium colour. The inclusion of the two 20mm cannon is also optional. The drawings on the instruction sheet indicate that these aircraft did not have the cannons installed though that may be an oversight. These two seat Skyhawks appeared throughout their service careers with or without this armament depending on the needs of the unit assignment at the time. Check any contemporary photographs to confirm your choice for accuracy or simply do what you please. The chances are that for any given aircraft you will be correct for one point in that plane's career. The instructions show the addition of the leading edge flaps at this time but I saved that for later as to glue them into place now would complicate the painting process

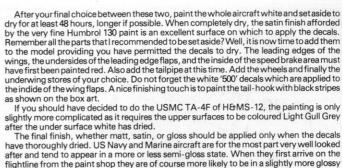


Stage 7
I have found by past experience that if you save the addition of the undercarriage legs for the last few minutes of an evening's work, it will give those fragile little beauties sufficient time to dry before you resume construction the following day. I also do not secure the tyres and wheels into place until after the model is completely painted. This diversion from the traditional method will help prevent the inadvertant painting of the wheels in the colour of the airframe. Place the wheels on a cocktail stick after painting the basic matt white and paint the tyres a very dark matt grey. This always gives a more realistic appearance than the usual matt black. Add all the various parts as shown on the drawing but save the addition of the wingflaps until you've completed the painting.

Stage 8
This is the final assembly time and I'll just bet that you've anticipated me and already glued all those drop tanks, rocket pods, and pylons together. If not, then do so now. It is usually a reasonable idea that when reviewing the instruction sheet before starting your model, to make some choices as to exactly how you desire your model to be displayed. The choice of external stores is up to you but Fujimi offer the centre line drop-tank, two under wing drop-tanks, and two rocket pods. When the final decision has been made and the things-underwings have been assembled and painted, save their inclusion until after you have completed the painting and decaling of your model.

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While there is no stage 9 on the instructions, there is a marking and painting section and this step is included to assist you in that procedure. There are four very colourful choices included on the decal sheet though you can safely discount the Israeli option. In order to accurately represent this TA-4H version you must possess the necessary skills to scratchbuild the tailpipe extension shown on the drawing. This is outside the scope of the article so you must choose one of the other three schemes. The first two are the easiest as they require only a basic overall white. I have found that Humbrol satin white 130 is the best paint for this use. The comprehensive decal sheet provides all of the other markings required. The Japanese have made giant strides in the field of decals recently and this sheet is no exception. These two TA-4Js are not only among my very favourite of all time but may be the two most colourful operational warplanes to ever see service.



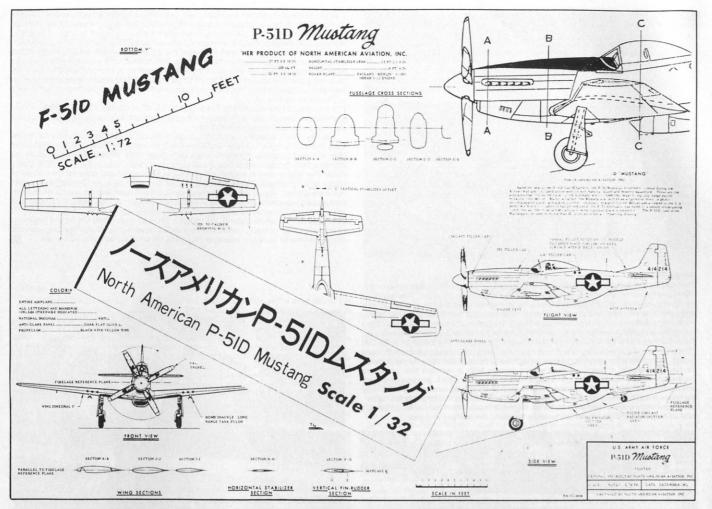
slightly more complicated as it requires the upper surfaces to be coloured Light Gull Grey The final finish, whether matt, satin, or gloss should be applied only when the decals

have thoroughly dried. US Navy and Marine aircraft are for the most part very well looked after and tend to appear in a more or less semi-gloss state. When they first arrive on the flightline from the paint shop they are of course more likely to be in a slightly more glossy state. This also applies to aircraft which are specially waxed and polished for the use of higher ranking officers. These aircraft are those that often have the 'Double Nuts' or '00' numbers applied. When the more utilised service types have accumulated a lot of flight time and are exposed to the elements in addition to the rigors of high speed flight, they tend to become gradually more matt in finish. Paint oxidation alone accounts for most of this deterioration of finish. In the end, the choice is yours and practically any type of finish you choose would be 'correct'. Humbrol offer a variety of varnishes for you to apply over your completed model to obtain whatever degree of reflective surface that you desire.









# THE TROUBLE WITH DRAWINGS...

# BY JAMES P.WOOD

SCALE drawings are a thing of beauty to anyone who has more than a passing interest in modelling. Aside from the intrinsic aesthetics of the crisp line work and carefully crafted lettering and notes they transmit the image of their selected subject in an orderly and scientific fashion. It is usually obvious to the observer that the choice of the subject of the drawing was dear to the draughtsman and the final work no less than a labour of love. The operative word in the last sentence is 'usually'. This article will deal with the origin of those wonderful general arrangement (GA) drawings that provide modellers with the single most important basic reference to aid us in completing an accurate replica of the aircraft, ship, or vehicle of our choice.

It has been said that plagiarism is copying one persons work and research is copying a lot of peoples work. As glib as this may appear to be it has its root firmly planted in truth. Where does a draughtsman start his beloved drawing? Where does his research begin? Having had the background of being employed as a draughtsman in my distant youth I believe I can draw on some significant personal experience to give some insight into these questions. The hobbyist draughtsman may or may not be a professional as well. If he just happens to earn his living on the drawing board he will be aware of the potential pitfalls of research and

carefully organise and collate the data available to him before he puts pencil to paper. If not a professional he will naturally fall prey to a myriad of traps that have been set quite unknowingly by the printed word and illustrations which he has gathered to begin his opus. Initially a brief check of printed dimensions may turn up conflicting numbers. The fact that there may seem to be some sort of concensus is not at all reassuring as past researchers may all have been simply copying and therefore perpetuating false data. Some of the world's most used reference works are notorious for containing incorrect information. The best way to discover whether a printed dimension is indeed correct is to take tape measure in hand and apply it to the subject to be undertaken. Of course this implies that one has access to the full size prototype in the first place. As this is not always possible or even practical (I'll take Boeings word for the printed dimensions of the 747!) the next best bet is to query the manufacturer itself.

After making the final decision regarding the correct size of the subject of the drawing, the next step is to determine the proper shape from as many views as necessary and to determine cross sections. If one has the manufacturers drawing available one has a mixed blessing. As GA drawings go, the manufacturers drawings are just that, general.

While working for a US aircraft manufacturer quite a few years back I became privy to a titbit of information that any aspiring pro-

ducer of GA drawings might file away to aid his healthy scepticism. That is that the neat little three views that one may generously receive from any public relations department of a large concern that produces full size aircraft are actually drawn by personnel in that very same department. They are artists and most often not draughtsmen or engineers and therefore said drawings should be immediately suspect regarding their absolute accuracy. As most periodicals publish either direct copies or hastily redrawn examples of the drawings supplied by the manufacturers they are also in many cases guilty of perpetuating misinformation.

The next step in casting flawed information in steel occurs when the authors of reference books more intent on accurate text and usually unequipped to assess drawing accuracy supply their publishers with pitiful reproductions of some young commercial artist's impression of a given prototype.

There are also other potential errors that occur in manufacturers drawings such as security considerations imposed by concerned government agencies. Random size and shape of radomes is the bugaboo that immediately springs to mind. These are often deliberately drawn inaccurately to mislead the 'enemy' as to the range and power of the radar on prototypes which can be readily determined from scale drawings.

The draughtsman's last resort to accurate basic reference is photographs and unless these are actually taken by the draughtsman

himself with appropriate views and scales included he will not always be able to obtain suitable or sufficient quantities to do his subject justice. It is at this point in the process that guesswork tends to creep into the drawing board. It should be now painfully obvious to the reader that truly 100 per cent accurate GA drawings are a relative rarity.

But do not despair, there are dedicated people in the modelling world concerned with the same things with which all modellers are equally concerned and accurate drawings do exist. However it must be said that the final judgement has to be based on a personal opinion and therein lies the problem. A modeller has to base his opinion on experience as do the manufacturers of kits. The name on the drawing will finally be the best assurance of that specific drawing's ultimate accuracy. An excellent example of a reliable source of extremely accurate drawings conscientiously executed are those of the late Paul Matt in his personally published 'Historical Aviation Album' series. Poor examples are legion and are far too numerous to list in this brief article.

When economic considerations or the genuine lack of time or other resource, not to mention talent, rear their ugly heads the drawing will ultimately suffer as will the kit or model that is based on it. As an illustration I have chosen a well-known shape to present the argument that any given model or kit is only as good as the drawing from which it was made. The North American P-51D Mustang is an image that is familiar to almost all modellers young and old. It is a reasonably simple shape though not without a few of its own individual complexities that have eluded many a draughtsman past and present. One can almost forgive someone for missing the essence of the classic beauty of the form of the Spitfire's elliptical wing and complicated fillets but certainly not the angular simplicity which was designed directly into the Mustang.

I shall present my case in the shape of the mini-history of drawings of the Mustang that have appeared over the past 40 years and sketches of the sometimes apalling appearance of the kits that have been designed from these same drawings.

It is not my intention to disparage the efforts of any kit manufacturer as the process of producing an injection moulded kit is extremely complicated and expensive. It involves many people and separate departments often in different parts of the world creating communication difficulties that we can only wonder about. In the end, the creation of a new plastic kit always benefits the hobby as it will inevitably stimulate the interest of all of us one way or another.

The Airfix 1:72nd P-51D/K which seems to be based on their 1:24th scale super kit of the same aircraft. It has some problems but is unmistakenly a 'Mustana'.



The Heller 1:72nd P-51 was obviously derived from the drawings in a 1972 issue of Aeromodeller. This kit offers the most options for the enthusiast as it can be made with or without the fin fillet.



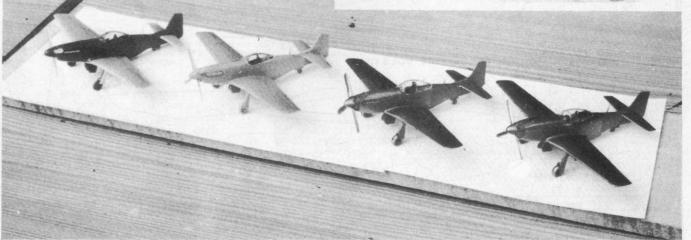
Matchbox's P-51 is the best value for money and was the first of the truly accurate models of the 'Mustang'. It is basic and simple and a good choice for the beginner.



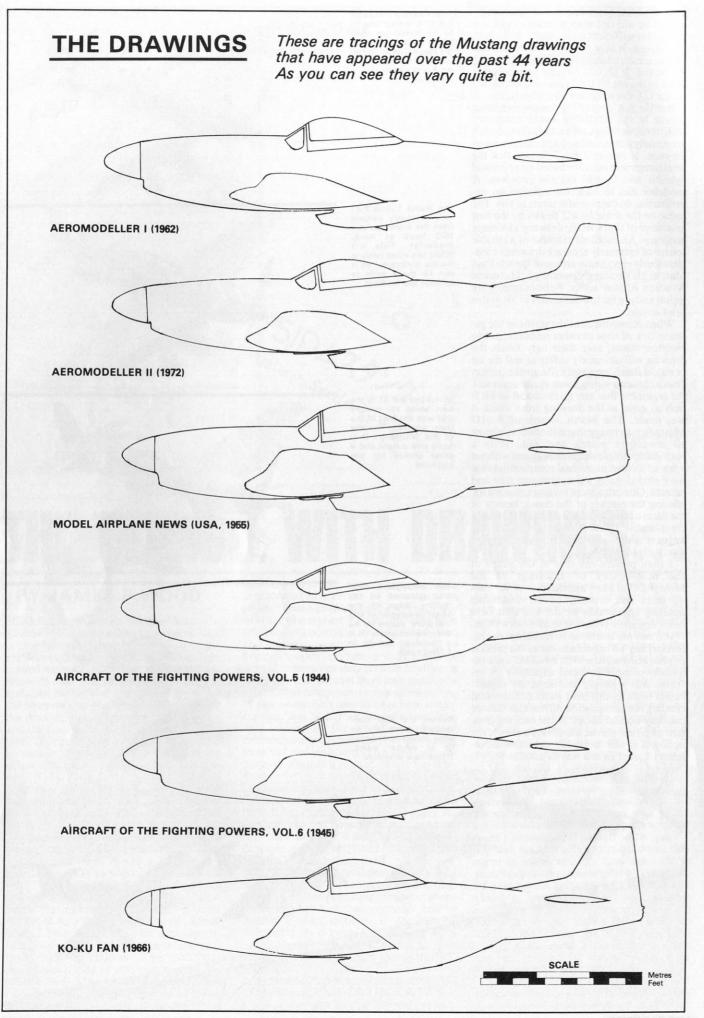
The Hasegawa P-51 was released on the leading edge of the latest generation of kits therefore seems to be the most accurate. It is a thing of beauty in 1:72nd scale.

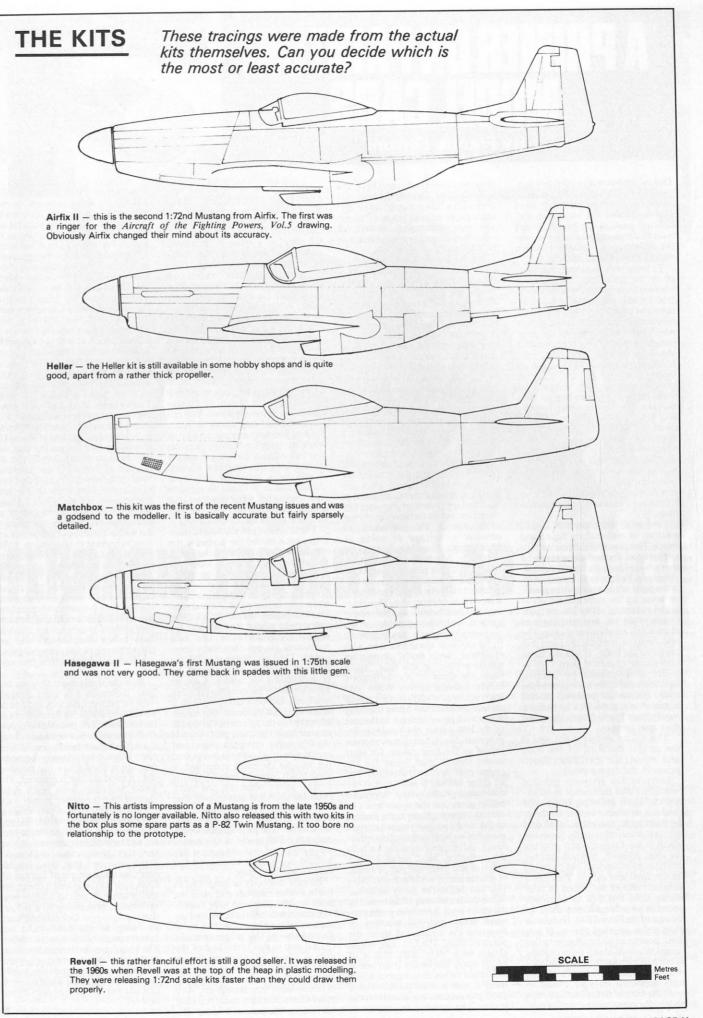


Below: the four contenders, wing tip to wing tip without benefit of primer paint. Which one is which?



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# A PRIMER ON PAINTING **MODEL CARS**

By Franco Ferroni



This information is printed as a supplement to the main F40 article as some of our readers may have already divined the secrets of successfully painting car models. If this is so please return to the text, however the information contained herein may be of help to all modellers.

To begin with, as already mentioned in the main text, to anticipate possible frustrations that are likely to crop up later during the actual construction of any given kit, review the instructions carefully to determine which parts will comprise the completed car body. This is essential to obtain a smooth consistent paint finish on your model. The manufacturers often mould the body in several separate parts because of their complex shapes and curves. You may also find that the doors, bonnet, and boot are moulded as separate parts to facilitate their use as operating components. In either event when they are ready for painting they should be separated carefully from the runners and treated for painting before the actual kit construction begins, regardless of the information contained in the instruc-

First wash these parts in a mild solution of dishwashing liquid and water. This is essential to remove the release agent that is always present on the moulded parts but not always obviously so. Failure to do so may result in the paint not adhering to the plastic or worse yet the paint flaking off in time or coming off in bits on your fingers while you are handling it to show it off, most embarrassing. The next step is to assemble the parts that comprise the body. If you decide to incorporate operating parts such as doors they should be painted separately but at the same time as the body. Before the painting process begins it is a good idea to make a small simple frame from a discarded wire coat hangar.

This frame should assist you in the careful handling of the body and avoid the potential fingerprints in the drying paint.

Everyone has favourite painting techniques and the author is no exception. There are many varieties of products available to the modeller for painting his model but I shall deal with just three in this guide, the last of which is my favourite and possibly the most difficult. Method number one is the most obvious and probably the cheapest and easiest. Pick out a suitable tinlet of the colour of your choice from the rack of Humbrol paints at your local hobby shop. In the case of the Ferrari F40, Humbrols gloss red is an ideal choice. If you don't possess an air brush select a flat tipped brush of about three-eighths to one half inch width of good quality to do the job, as you don't want brush hairs deposited on your model to spoil the finish. Before actually applying the paint to the model and

after the various body parts have now suitably dried, smooth the join lines over with a fine grained 'wet or dry' sand paper of 400 grade or more. This type of indispensable tool for modelling is readily available at any DIY shop at a nominal cost.

Brush painting is not a simple task and it is very difficult for a beginner to achieve a satisfactory painted finish for a car model by this method. However, having said that, it is finally the cheapest and easiest of the three methods. Be sure and apply a series of thin coats of paint allowing sufficient time between coats for drying so that you can rub down each layer of paint gently with 400 or better yet 600 'wet or dry' paper. If one takes the time and exercises a great deal of patience during this process one can attain a presentable finish to ones model by utilising this technique. Now you can set the body aside for a long time while you begin construction of the balance of the kit.

The second method of painting the

body is spray painting it using the same Humbrol range of gloss colours, but instead those contained in the small spray cans, or if you are fortunate enough to own one, by the use of an air brush. This method has the obvious advantage of using an enamel paint, therefore not attacking the plastic, and the final finish attained will be more pleasing due to the fact that the sprayed finish is more attractive to the eye. The disadvantage is that it is more expensive. The spraying process begins as the above method with the assembly of the necessary body parts. You may desire to fill any gaps along join lines with Humbrol 'Body Putty' or another similar product at this time. Again allow the body to dry sufficiently before rubbing down. When you have achieved a sufficiently smooth surface you may now spray the body with a matt primer colour. In the case of the F40 a matt red would be appropriate. If you had chosen white or yellow as the final colour for your model then a matt white for the primer coat (or coats!) would do. For all other colours a matt grey is the traditional primer colour. A primed model gives one the opportunity to see any imperfections on the surface of the model so that you can correct them before applying the final paint finish. After permitting the body to dry (patience, lads, patience!) rub down or add putty and rub down until you are happy with the finish. Now you can begin the spray painting. While this is a bit easier than brushing the paint on it does have some problem areas and I'll attempt to forewarn the uninitiated about the potential traps. The first coat should always be a 'dust' coat, that is to lightly spray the model from about six to eight inches distance so as to not

cover it with a solid colour. Get a

good grip on your impulses to avoid

seeing the model in glorious

technicolour at this point and set it aside to dry. The next coat should also be a light coat though you may apply it a trifle more consistently than the last. The reason for applying the paint in a series of thin coats rather than one or two thick ones is simply to avoid a dreaded run or pool of paint which could ruin all of your effort. Beware of the temptation to apply thick coats to save time. Set it aside. While the model is drying it should now be mentioned that painting a car model requires a certain degree of dedication, not to worry though, the ultimate rewards for your efforts can be superbly satisfying. Ah, the model is dry once again, that didn't seem like forty-eight hours, did it. Take your trusty 400 'wet or dry' in hand and rub the now terrifically dry paint down. You can repeat the last step above as many times as you humanly can stand it or when the penultimate step provides you with a finish that you personally can live with. The final coat of paint should be a relatively thin coat though this is difficult to regulate with a spray tin. After this final coat set the body aside and start the construction of the rest of the model.

The third and last method of painting plastic model car bodies is the one that I used in painting the F40 in the article. This is not a technique that should be attempted by beginners or those of faint heart as it involves spraying your treasured purchase with laquer paint. As everyone knows, laquer paint attacks the polystyrene plastic that our kits are made from because the two substances are not chemically compatible. One can, however utilise the inherent qualities of the paint by understanding its nature. Lacquer paint is used for painting the full sized machines and provides them with a bright long lasting finish. The choice of spray touch-up colours available at your local car spare parts shop is usually quite comprehensive and reasonable in cost, about one pound per tin. As the paint contained in these tins is correctly matched to the actual paint used by the auto manufacturers it is only natural that if it is remotely possible to apply this product to your model then it is worth a go. The photographs of the completed F40 model in this article are living proof that one can use this method but it can't be stressed too much that it isn't easy.

Prepare the body as described in the two other methods and place the body on the prepared wire frame. The model will have to be primed using a suitable colour of primer as indicated above. This primer coat is a crucial step as this is the first of the critical stages of applying laquer paint to plastic. When I say dust the model with a fine spray coat, dust is precisely what you should do. Any more than a fine light spray reaching the plastic surface will craze the

smooth plastic and destroy the finish. Yes, you've already guessed the next step, set it aside to dry. As is always the case when painting with laquer, this is particularly important as the surface of laquer paint dries almost instantly but beneath the apparently hard surface there are millions of tiny molecules of paint in conflict with the plastic molecules. It takes a very long time for these little fellows to settle their difficulties and, brace yourself. you must allow them a bare minimum of twenty-four hours to achieve peace. If it is at all possible, allow as much additional time as you possibly can. After a primer coat or two with the attending filler putty and rubbing down proceed to the colour of your choice. I used Volkswagen 'Mars Red' as it was a near enough to the actual colour, Fiat Rosso 120, to suit the needs of this article. I once had a gallon of Rosso 120 specially mixed for me but that was only because of my devotion to the marque of Ferrari. I am sure that most modellers don't share that kind of extreme fanaticism or for that matter own an air-brush through which to shoot a whole gallon of paint. Air-brushing laquer paint is not within the scope of this article so I shan't continue the digression. I also wished to develop the technique of painting car models with the readily available touch-up spray tins to pass this on to our readers. The colour coats may now be applied as many times as your patience and spare time permit with the thought that the more time allowed between coats, think of days rather than hours, the less chance there is of you witnessing your purchase shrivel up before your very

If in the tragic event that the lacquer molecules win their struggle with the plastic molecules and you do end up with a crinkled finish, don't be disheartened. It is possible to recover from your lapse by once again giving the distressed model its proper drying time. When dried properly the model must be rubbed down and polished until a good surface is restored. The whole procedure must begin again starting with the dusted primer coat. I'll just bet that most of you would at this point resort to good old tried and true Humbrol enamel to finish your car and I wouldn't blame you. About the only suggestion that I could make at this juncture is that, if it is feasible you may select an out of fashion kit from your loft or at best a cheap one and practice on that to achieve your skill before proceeding to a subject that is dear to you. One can only learn doing in this hobby and our failures can only improve our talents. The actual construction and painting of the kits that we purchase is where all the true enjoyment of this hobby lies and the ultimate satisfaction is that our next model can only be our

SEPTEMBER 1988



# FERRARIS FANTASTIC F40

# Franco Ferroni shows how to build Italeri's 1:24th scale F40

The year 1987 was the 40th anniversary of the famous sports car manufacturer Ferrari. To commemorate this occasion the company made the decision to produce a limited edition machine that resulted in the magnificent F40. Originally they had decided to produce 400 examples but the demand, even at the astronomical price of £125,000 (VAT not inclusive!), was so great that production is continuing and it is expected that Ferrari will eventually construct more than 900 examples. The only way that most of us can come close to ownership of such a fantastic sports car is to opt to purchase a 1:24 scale plastic version. Admittedly the model won't go as fast however, it most certainly is in a less expensive insurance group. By building the model we can experience the appreciation of the cars aesthetics without all the financial worry

The full size F40 has a twin DOHC, four valve per cylinder, twin turbo, fuel injected, three liter, V-8 engine of 478 BHP. (Wow, that is a mouthful!) It has a top speed of over 200 MPH and will accelerate from nought to 125 MPH in a mere 12 seconds. It's just the thing for you to pop over to the local hobby shop in just to pick up a tinlet of paint. The

tubular frame is covered with a carbon-fibre body of outstanding beauty. Italeri have managed to capture its essence with startling accuracy.

The successful construction of all car kits always hinges on the painting. The instructions contained in most car kits are usually notable for not stressing this fact however obvious that this may be to the manufacturer. In order to facilitate the smooth execution of any car model one must first consider the painting of the body. I say consider because often times the body of the model is not included in one kit as one piece. This F40 kit is no exception as the rear wing is moulded as a separate piece as well as being a different

These two facts do not present any particular problem though if you happened make this discovery at step eight in the instructions after painting the body without the wing added you may have a tendency to be a trifle upset. Other kits have doors, boots, and bonnets moulded as separate parts and all body parts should be painted at the same time. After securing the wing, part B65 to the body you may now paint the completed asembly using the method of your choice. (See box!) You might also want to paint the mirrors (parts B70 & B77) and parts B51 & B52 at this time.

Now that the body is painted, set it aside to dry for as long as you can humanly stand not touching t. I recommend any period longer than 48 hours with a week or two being an ideal length of time. While the body languishes alone in some dust free area you may now begin construction using the kits excellent instruction sheet. I shall assist you in this process with a step by step commentary to aid in avoiding any potential pitfalls. I must comment that the engineering of the kit is well thought out as the parts are numbered on the trees in the correct sequence for assembly. Therefore construction begins logically with part A1 in step one.

manufacturer.

of Italeri's Ferrari F40. 1987 was

the 40th anniversary of this

famous Italian sports car

### CONSTRUCTION

Step 1.

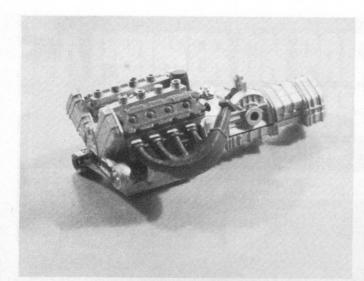
This first step is the basic assembly of the engine parts. It is suggested that the various parts are painted and set aside to dry before beginning to apply the glue. Also be sure to scrape the dried paint off the surfaces to which glue is to be applied. This will avoid headaches later in the day. The only potential problem at this point is that on the plan where the colour black is indicated for part A10 be sure that you only paint the accesory belts black and not the whole part.

Step 2.

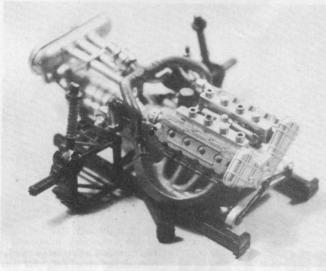
No problems here, though I painted the silver plastic parts a matt aluminum and the black plastic parts a matt black. This is a personal choice and not at all necessary.

Step 3.

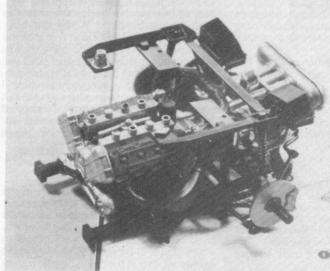
The engine sub-assembly has now accumulated a myriad of bits and looks a lot



The completed engine at the end of Step 1.



At the end of Step 2 the rear suspension members and turbo parts have been added.



When you've finished adding all the parts required in Step 3, the tiny assembly takes on quite a complicated appearance.

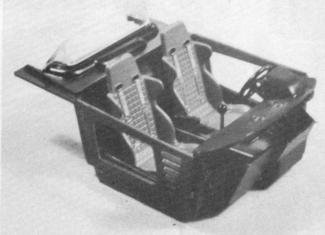
more complicated than it really is, it does look good doesn't it. Step 4.

After the above sub-assembly has thoroughly dried it is time to mate it to the chassis asembly. Once again I painted the black plastic parts matt black even though this is optional. I strongly recommend the use of superglue as it will provide a better bond than any plastic cement. Step 5.

The completion of the F40s interior is a piece of cake. The only comment I can think of is to secure the gearshift with C.A adhesive.

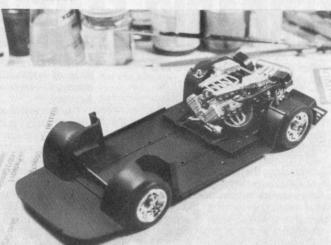


This step is to remove the bottom rear portion of the body thereby creating an additional part. Have you given your body sufficient time to dry? This operation is required only if you desire to incorporate an operating rear engine cover to your model. As one can see the engine quite satisfactorily throught the clear rear window, it is not absolutely necessary. It may save you some grief to avoid this procedure. The clear parts included in this kit are the best I've ever seen. If it is decided to have an operable engine cover be sure and exercise extreme care not to sever the two tiny bits of plastic that will serve as hinges.



Step 7.

While the plans do not mention it, the fact is that one should make an attempt to indicate that the car has a black rubber gromet surrounding the windows. This can be simulated by very carefully painting with a fine tipped brush a thin matt black line around the window openings. As this is requires a very steady hand you may choose to ignore this suggestion though it does addd to the overall appearance of the completed model. Add parts B51 and B52 to the inside of the body before the clear parts. After exercising the greatest caution so as to avoid applying any adhesive to the clear parts while adding them to the inside of the body, the interior sub-assembly can now be mated to the inside of the chassis.

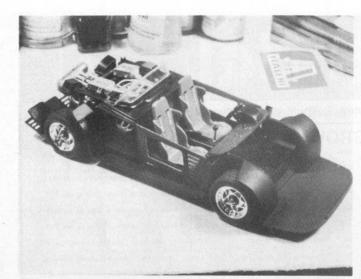


Step 8

The penultimate step at which time it may be a good idea to sit back for a moment to have a cup of tea. A drop of glue on the paint finish caused by the attempt to rush through to the last step might just spoil your day. It is suggested that to obtain a more realistic effect for the clear plastic pieces that should be a transparent red or amber, use a felt tipped pen of a suitable colour for this task. Do not attempt to paint the black trim line around the body but use a fine tipped "permanent" black pen. These are obtainable at most office or art suppliers at a reasonable cost and have many applications in modelling. While running the pen around the body the moulded groove will act as a guide.

### Step !

This is the final detailing step and after you've stuck on the last tiny bits (2x E78) sit back and wish that you were a 1:24th scale driver behind the wheel at a scale 200 MPH on some Autobahn passing all the natives in their 1:24th scale Mercedes Benzs and BMWs.



The chassis assembly is now ready for addition of the body.



This is the body just prior to final detailing.



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A11		0.	Hunter Rough Diamonf Display To
A12	German WW1 crosses, various styles early and late war.	S2	Royal NZAF Mustang IV No.3
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C1

Hungarian national markings and numbers plus tail KILL markings at badges for JG3 UDET.

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German Gruppe markings.

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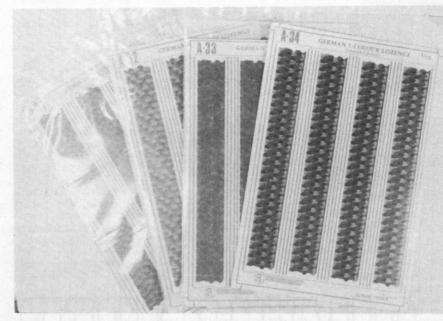
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Repli Scales 'Fightertown USA' (VF-124) decal is available in both 1:72 and 1:48.

FIGHTERTOWN USA VF-124

1002 72ND SCALE

A REVIEW OF RECENT TRANSFER RELEASES



The new Almark lozenge decals are very colourful and will save the modeller much effort.

were sent by the distributors of Almark Decals, ED Models of Solihull. They consist of no less than eight sheets all of which deal with the subject of World War 1 aircraft subjects which have been hitherto almost ignored by the decal manufacturers. They are therefore a welcome addition to any modellers library of decals. I specifically used the word 'any' for the following reasons. The average or relatively inexperienced modeller should welcome this selection of crosses and cockades because the transfers included in the World War 1 aircraft kits often are printed in incorrect colours with the centres far off centre. These new sheets from Almark, which were expertly printed by Colourside, are in the right colour with every roundel's centre printed spot on. As far as the 'expert' or advanced modeller is concerned, he should now not be forced into pinching decal sheets from his secret supply of kits hidden in the loft. The sheets offered are as follows: Sheet A27, British Roundels 1:72, 58 blue whitered roundels in nine different sizes with a strip of red, white and blue for rudder stripes; Sheet A28, French Roundels 1:72, 39 red whiteblue roundels in four different sizes with the appropriate red, white and blue for rudder stripes; Sheet A29, german Eiserne Kreuz 1916-17 1:72, 55 Maltese crosses in five different sizes, also included on this sheet are some typical black-onwhite numerals of this area and 14 Albatros company insignia; Sheet A30, German Balkan Kreuz - 1918 1:72, 56 of the late war squared-off type crosses in a variety of sizes.

This month's samples for review

The next four sheets are the greatest labour savers in the hobby. If you've ever had the misfortune of living at a time when the lack of sophistication of your hobby forced you to handpaint, hexagon by different coloured hexagon, a myriad of mind boggleing hexagons, then you'll find these offerings a godsend. Sheet A31, German four colour lozenge (upper surface) 1:72, four six inch strips of lozenges; Sheet A32, German four colour lozenge (under surface) 1:72, also four six inch strips but of the lighter pattern; Sheet A33, German five colour lozenge (upper surface) 1:72, again four six inch strips; and lastly Sheet A34, German five colour lozenge (under surface), the complimentary sheet of the above, four more six inch

All the sheets inspected were well printed and the colours were all very dense. The adhesive used on the decal paper, called Decafix, utilised by Colourslide is truly the best available. All the sheets reviewed contained a printed page of instructions that adequately explains the background and use of each sheet. The only criticism that needs to be mentioned is that whoever did the artwork needs a German language lesson. On both sheets A29 and A30 the word Kreuz, meanining cross, is misspelled as Keruz. That's admittedly not much to winge about but after all, we reviewers have our precious reputations to live up to.

The decals reviewed and the balance of the Almark transfer range are available directly from ED Models, 64 Stratford Road, Shirley, Solihull, West Midlands, B90 3LP.

Upper left: the World War 1 British roundels; upper right, World War 1 French roundels; bottom row, the two varieties of World War 1 German black crosses.

# **ACCENT ON ARMOUR**



# Phillip Greenwood builds Tamiya's 1:35th scale

THE Challenger is a development of the Chieftain Main Battle Tank (MBT), which first entered service with the British army in 1967. Although the Chieftain has been constantly updated with new engines and equipment, a replacement was needed for the early 1980s for several reasons. Tank development had been revolutionised by the mid-1970s, with new fire control systems, extremely powerful engines and most significant of all, by the development of Chobham armour. This laminate of steel, ceramics, aluminium and other secret materials, was invented in Britain and was first used on the American M-1 Abrams and German Leopard 2 battle tanks.

The development of Britain's replacement for the Chieftain, the MBT-80, was getting very expensive and it would not be ready for service before the late 1980s, even if all went well. Meanwhile a much improved development of the Chieftain possessing all the latest technology, had been made for the Imperial Iranian army. However, before any of this new type, named the Shir Iran (Lion of Persia), was delivered, the Iranian government changed and the order for the Shir Iran was cancelled. The British government now found itself with a new tank design financed by the Iranians with

almost all the advanced tech- fired with 90 per cent system ac- M-1. The IFCS is allied to the nology of the MBT-80. The choice was obvious, the MBT-80 was shelved and the Shir Iran was put into production in a slightly modified form, as the

# **BRITISH ARMY SERVICE**

The Challenger entered service with the British army in 1983 with the Armoured Regiment of the Germany. Though the Challenger looks similar to the Chieftain almost all the major components were changed from the original design.

Leyland L60 engine was replaced the new TN-37 transmission with system replaced the Horstmann tainly no slouch in this respect. type which was first used on the Chieftain's predecessor, the other tank in service anywhere in characteristics), all in the matter ding Sabot (APDS) round, range accuracy, it has been targets 3,000 meters away can be criticised for being too slow while hit with 98 per cent accuracy, engaged in short range gunnery while the High Explosive- giving a slower rate of fire when

curacy to over 5,000 meters. This is more than twice the effective range of most other tanks. The smooth-bore fitted to most of the current generation of MBTs. including the Leopard 2, M-1A1 Abrams and T-74, are accurate to a maximum 1,500 to 2,000 meters range.

The Challenger is fitted with 'Improved Chobham' armour which is a newer type than that 12th Royal Hussars stationed in used by the Americans and Germans and gives an even higher degree of protection to the crew. The road speed of the Challenger is 35 mph (56 kmh) which is slower than most other MBTs The Chieftain's troublesome however, the cross-country speed and agility is as good as any with the 1,200 bhp Rolls Royce and better than most. On trials Condor diesel engine coupled to against the Chieftains the Challenger finished the crossa Howden cooling system. A country battle runs almost twice hydropneumatic suspension as fast and the Chieftain is cer-

The Challenger is equipped with an Integrated Fire-Control Centurion. The L-11A5 rifled System (IFCS) which takes into gun is the same as that fitted to account vehicle attitude, weather the late marks of Chieftain, and conditions, range, speed of gives firepower superior to any target and fling (individual barrel the world. When firing a stan- of two to three seconds. While dard Armour Piercing Discar- this system gives good long-Squash head (HESH) can be compared to the Leopard and

Thermal Observation and Gunnery System (TOGS), which is just coming into service and all Challengers were built to accept it. This system uses highdefinition thermal image cameras allowing observation and gunnery in all weathers, day or night. More new equipment is currently under development including the Visual and Infra-Red Screening System (VIRSS), L-30 'high technology' gun, new IFCS and the Hughes 'Chain Gun' to replace the co-axial 7.62 machine

# TAMIYA MODEL USED

Tamiya released their superb 1:35th scale model of the Challenger early in 1987 as a result of popular demand. As good as this kit is, it could use a few additional detail items if you choose to take the time and effort. This is due to Tamiya's included option for motorisation. All their kits are usually designed with a removable top hull. The kit is relatively easy to build by following their step by step instruction sheet. But as this does not tell you everything, this article is intented to help the beginner develop the skills which will help transform him from a 'kit builder' to a 'scale modeller'

Before I begin building the kit,

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I would like to say a few words about tools. The essential items are a sharp knife, I use a No.4 scalpel handle for heavy cutting, and a No.9 handle for smaller blades used for detail work. Next on the list is a set of small rat-tail files, a pin-chuck with small drills, tweezers, nail clippers, miniature pliers, scissors, razor saw blades and a steel rule. Another item that is invaluable to the modeller is a 'Murphey's Rule'. This is a ruler marked in scale feet and inches, mine is 1:32nd and 1:35th scales though rules for 1:72nd and 1:48th are also available.

As stated earlier, the Tamiya kit is modelled on one of the early production Challengers which include tanks from 33KA94 to at least 34KA10. Photographs of later tanks with numbers from 34KA53 to 35KA34 show that some minor changes have been made. The later tanks have a different front plate which is bevelled at both sides (the early plate is 'stepped' on the left side) and the two rectangular openings each side of the hatch have welded patches over them.

I decided to build my tank as one of the later vehicles but this is strictly optional. An accurate model can be built without these modifications. I started out by reading the instruction sheets and making sure that I understood the assembly. It is a good idea to 'dry run' the assembly as this can help avoid costly mistakes.

The lower hull and trackwork, sections 1 to 8, were built without much trouble following the instructions. When finished I painted the hull sides and the wheels in the basic colour, which for my model was Light Olive Green (Humbrol 86) and dark grey for the tyres. The tracks were also painted at this stage, steel grey with the rubber blocks painted black, and when dry they

This is how to relieve the hatch handles with a razor saw. Exercise the greatest caution doing

were given a 'wash' of thin brown paint. Two strips of 40 thou plastic card were cemented to the inner hull sides to support the upper hull and so give the model extra rigidity.

### TURRET ASSEMBLY

Building the turret is the next step. I found this assembly rather tricky, especially lining up the turret sides B-72 and B-78. Insure that these parts are flush with the top of the turret. My next job was to cut away the excess plastic from under the grab handles on the hatch situated on the top left rear corner as shown in the photo. I first made a cut with a razor saw then carefully removed the plastic under the cut with a scalpel tip. The handles on the second hatch were undercut with a modified dental probe however, a scalpel tip is just as good for this job. The joints on the turret can be filled with plastic putty once assembly has been completed. I used Squadron 'Green Putty' for this as it bonds with the plastic. Humbrol 'Body Filler' is just as good and works in the same way but as a caution do not use these types of putty in large quantities as they will attack the plastic. Once the putty has set. I used a mediumfine wet and dry abrasive paper for rubbing down, 300 to 600 grade is recommended. This completes the major assembly. During construction I used MEK until the last so when I had completed the turret I returned my attention to the hull. My first job was to modify the front hull to that of the late production tanks. liquid cement for the simple reason that it is less destructive than tube cement. I did resort to

the use of super glue to stick the mesh to the camouflage net bin as it's fast drying characteristics made the job much easier.

I like to leave the detail work This is an optional step. A little plastic card was all that was needed to do so (see photo). Earlier in the construction a dry-run discovered that parts A-29 stand too proud so I filed about 20 thou from the lower sides before cementing them in place to insure a good fit. The remainder of the hull assembly went off without hitches. I now cemented the upper hull to the lower hull and trackwork then cemented the side plates in

The hull and turret could use a few minor details added to give that extra touch of realism. If you want that finishing touch, make the small parts shown on the drawing. Parts 'A' and 'B' which are for the track guard support brackets. Parts 'C' are the fittings for the rear hull sides. I made these from 20 thou plastic card and Micro-

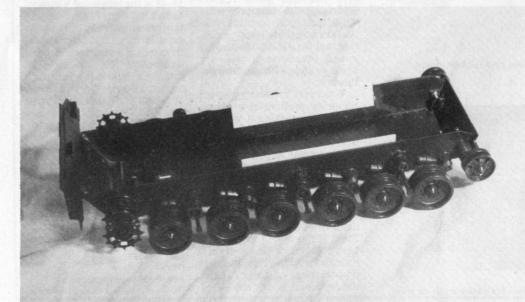
Because of the kit's motorised option, the inner track guards have a small square-shaped notch to facilitate the removal of the upper hull. These small holes must be filled before the support brackets can be fitted, see photo. The support brackets are bolted to the hull so I cut eight bolt heads from a scrap model as shown in the photograph. You may also make these from sections cut from plastic rod of an appropriate size. I cut four more bolt heads for the camouflage net stowage bin mountings, two on the right hand side and the second pair on the bin fitted to the left of the turret front. Refer to the photograph. The position of the small strips, part 'C' are il-

lustrated in fig.3. The antennae were made from 20 thou brass wire, as were the driving mirror stems and the handle on the drivers hatch. I did not glue the antenna wire in place, so that if the wire is accidently bent it may be replaced more easily.

The model is now ready for a good wash in warm soapy water, this removes all the grease and dust your model has collected during construction. I use a soft shaving brush to clean the model as this will not damage the small parts. When dry, the model is ready for painting.



The British army uses several different camouflage schemes, the most common being the 'Temperate' Light Olive Green/Black irregular pattern. The winter and desert patterns are simple variations of this as in winter the Black is over-painted in White, while in the desert scheme the Black is overpainted with Sand. Light Olive Green remains the basic colour. For many years after World War 2 Deep Bronze Green was much in evidence, though in recent times this seems to be restricted mainly to vehicles based in the United Kingdom. It appears that this colour has now been replaced with a 'Dark Olive' which from the photographs I have seen, is more of a brown shade than

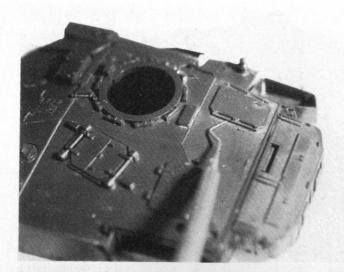


These two plastic strips will give your model some structural rigidity.

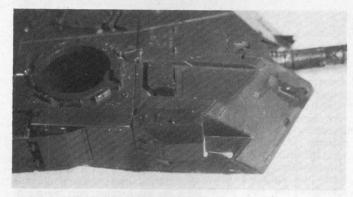
SEPTEMBER 1988

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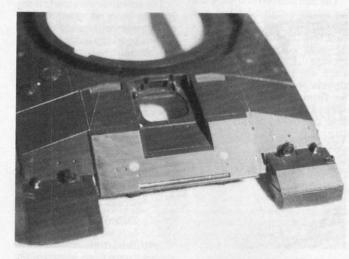
AIRFIX MAGAZINE - PAGE 19



Another handy tool is a dental probe though my dentist may miss his soon.



Any gaps that occur during construction can be filled with putty.



The two dots are holes that were filled and rubbed down.



The use of Microstrip is recommended for tasks such as this.

anything used previously.

Most Challengers are painted in the Light Olive/Black camouflage pattern which has a ratio of 2/3 Light Olive to 1/3 Black. The Black is sprayed in large blotches, or broad strips, but not in the thin stripy pattern as shown on the instruction sheet. A few tanks are in the new Dark Olive colours, both in the UK and in BAOR Germany. Apart from the number plates, vehicle markings are restricted to a Union Jack (BAOR), tactical markings and tank number. The tactical markings are the usual geometric shapes painted in contrasting camouflage colours, such as Black if on Light Olive or Light Olive if on a Black surface. When not on exercise, a small rectangular plate carrying the regimental badge is fastened to the door of the TOGS unit (kit part B-4). The instruction sheet has two recommended schemes, the first referred to as 'The British Army of the Rhine in West Germany' being a new tank of the Royal Hussars. It has tactical markings but has not yet had the Black disruptive pattern applied. The second example, 'UK Mainland division', is for one of the Challenger prototypes.

### PAINTING

Painting is the single most important modelling discipline for it can make a good model look bad but a well painted model can hide a lot of construction faults. For this reason I prefer to use an airbrush, at least for the basic colour. This is cheaper in the long run than using aerosol cans however, they are expensive. messy and must be well maintained. Humbrol, and some other makers, now produce many of the standard paint colours for armour in small aerosol cans, ideal for painting one or two models at a time. I would certainly recommend their use for large models as this. Brushing by hand can also produce good results especially with Humbrol paint which has superb covering ability. Take note that it is very important that the paint is thoroughly mixed otherwise it will dry streaky and with an uneven

Whichever method you wish to employ, the first step is to clean the model, washing it with the usual mild solution of dishwashing liquid and water and leaving it to dry in a place where it will not get too dusty. A quick wipe with an anti-static cloth will remove all dust particles just before painting. Painting is carried out in the stages described below:

Stage 1. Paint the model in the basic colour then leave to dry in a sealed box, this prevents dust settling on the paint. Stage 2. After the base coat is dry apply any camouflage patterns that may be

required. Stage 3. The next task is to paint the small details, such as lights and small fittings that may be in colours other than the body of the vehicle. Stage 4. Decals must be applied to a gloss surface or they will not adhere. A thin coat of Gloss Varnish should be applied to your model before the decal application. After applying the decals and they are properly dried, brush them over with another thin coat of Gloss Varnish and set aside to dry. Stage 5. A thin coat of Matt Varnish will return the model to a matt finish. Stage 6. The model can now be weathered simulating dirt, oil and rust stains.

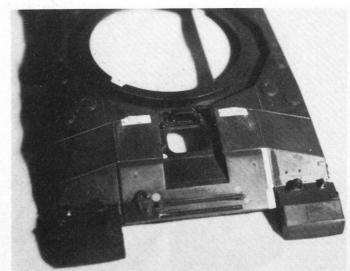
Remember that all the paints or varnishes must be dry before you apply further coats, allow at least 24 hours per coat drying time.

Weathering is an art in itself and takes a great deal of practice to get a satisfactory effect. A thin 'wash' of Black paint applied to the model will give 'age' to the colours and will give definition to joints and seams. A similar 'wash' of thin Brown paint will help to 'dirty' the model but try to keep it away from the said joints and seams. Oil stains can be simulated by a thinned dark black-brown mixture dribbled over the filler caps and allowed to run down the engine deck or hull sides. Red-brown rust stains can be done with a 'dry brush' technique. This is accomplished by taking a large brush with just a dab of paint on the end and stippling it on to the areas on which you wish to indicate rust. An old brush with the pointed end trimmed off is best used for this method. I have found that Humbrol HM7 Khaki Drill is an ideal colour for this.

Tanks used by most of the major powers are usually well maintained in peacetime so it would be unrealistic to give them the sort of treatment you would a weary PzKfw IV of the Eastern Front in World War 2, or an American M-48 in the jungles of Vietnam. Most Challengers I have seen are fairly clean and tidy but they do get a little 'grotty' after several days on field exercises. A good weathering job can serve to disguise a multitude of sins such as streaky paint finishes or the application of too much matt varnish. If your kit is beyond redemption than paint can safely be removed with a product called Modelstrip and after application you can start all over again!

For most of your Armour modelling needs: ED Models, 64 Stratford Road, Shirley, Solihull, West Midlands. B90 3LP Wings and Wheels Models, 30 Westgate Buildings, Bath, BA1 1EF Avon.

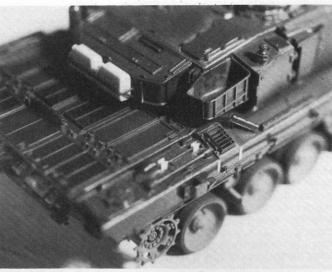
For the following supplies:
Pin Chuck, steel rule, files and fine drills.
Any good local hardware store



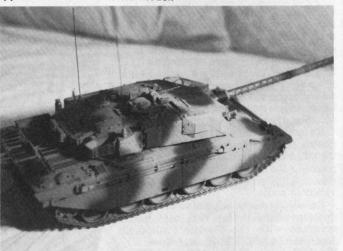
The white Plasticard contrasts with the plastic of the hull and



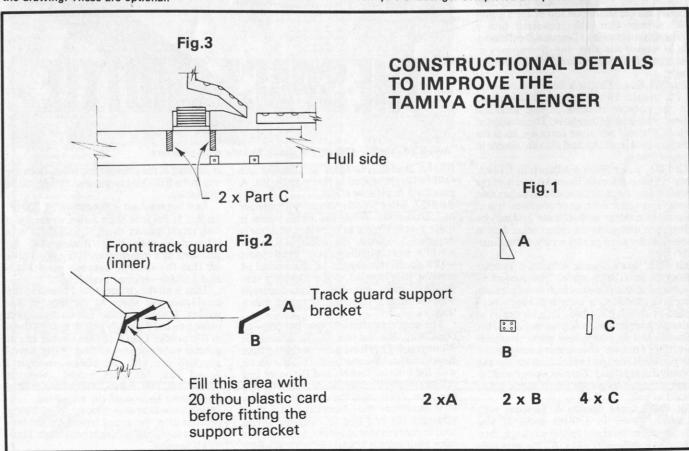
This shows the addition of the two Plasticard brackets made from the drawing. These are optional.



Little details as these additions add greatly to the overall appearance of the finished model,



Tamiya's Challenger completed and painted.



# **KITOGRAPHY**

This month's cover depicts the re-launch of NASA's space programme, which by coincidence was to be concurrent with the appearance of Airfix Magazine on the news stands. Hopefully the Space Shuttle will once again be fully operational and the limits placed on the inhabitants of this planet imposed by gravity will once again be freed. The Shuttles are the only spaceships we have on earth. All other means of transport devised to escape the bonds of our gravitational field are mere disposable pyro-technical devices. In order for any crew members to make the necessary return trip from these firecrackers to the surface of the earth they must use emergency procedures. The way home for the cosmonauts is by parachute and parachute alone.

We have all become jaded in time and have forgotten the significance of the Shuttle. The Challenger tragedy two years ago occured during a peak of optimism and was probably the result of some technological complacency. The concept of a space ship has been in the collective imagination of mankind for a long time but the Shuttle is a reality. It is a space ship, man's first space ship and its future success will lead the way to bigger and better designs that will increase man's determination of his own destiny.

As modellers, we seem to always want to express our interest in topical subjects and the kit manufacturers have not let us down regarding the Shuttle. They offer us no less than nine different models of the vehicle in a

variety of scales.

Revell have wisely included no less than six different models in their 1988 catalogue to coincide with the Shuttle's planned September launch. They are as follows:

Kit 4248, Space Shuttle & Boeing 747 in 1:288th scale. This shuttle and transporter kit depicts the shuttle on top of the massive 747 airliner that was converted into a transporter aircraft to ferry the shuttle back to its launch site after any diversionary or emergency landing other than Cape Ken-

Kit 4249, Space Shuttle & Booster Rockets in 1:288th scale. This kit is of the Shuttle mated to its booster rockets in the identical diminutive scale as the above. The completed models in this minature form are ideal for display on a desk top and also are simple in construction.

Kit 4344, Space Shuttle Atlantis in 1:144th scale. This is a slightly larger kit and is of the Shuttle alone with an operable cargo bay that includes a suitable cargo of satellites. It is in the more popular 'airliner scale' and may be displayed alongside the many other kits in this scale for a comparative view of the Shuttle's size.

Kit 4732, Space Shuttle Atlantis & Booster Rockets in 1:144th scale. The subject illustrated in our photo, which is truly an impressive model. Our copy was kindly supplied by Revell (GB) Ltd. This kit begins to give the impression of the immense size of the Shuttle and its component parts. It comes with the 'Tortoise' vehicle that transports the ship to the launch pad which also doubles as a handy display stand. That is a welcome inclusion to this excellent kit and it was a joy to

Kit 4911, Space Shuttle & Boosters with Launch Tower in 1:144th scale. If you thought that the above model was large, then this one is definately huge. All the intricaces



Revell kit number 4732 of the Space Shuttle with boosters

of the launch platform and tower are faithfully reproduced in this massive kit. A genuinely impressive effort.

Kit 4733, Space Shuttle Atlantis with interior in 1:72nd scale. While the above model is quite overwhelming as to its size, this one is designed to dazzle the adherents to the world's most popular scale. This model which accurately depicts all the myriad of ceramic tiles bonded to the Shuttle's skin would be most impressive when displayed with the balance of your 1:72 model collec-

The next manufacturer that has come to grips with the subject of the Shuttle is Monogram. They have gone one better than Revell and have released their 1:72 Shuttle kit with the booster rockets and the spare fuel cell included. This is the largest kit box I have ever seen, never mind the completed model. It is said that the Americans like their pleasures big and this kit certainly would tend to confirm that assertion. Monogram's other Shuttle kit is a 'Snaptite' version which

is directed at the younger modeller. Both are still in the RIKO catalogue and should still be

Last but not least is Hasegawa's 1:200 offering. It fits into their airliner range and one might expect them to release it at a later date with their Boeing 747 kit included as a transporter. It is a good little kit that fits sizewise between the 1:144th and 1:288th versions available.

That is all the choices that I found in the catalogues and shops at the time of this writing. There were other kits on the market in the past but it is really pointless to list them in this article. I did find that Shuttle kits in general were not easy to find. After Revell supplied me with the review example I found that MilSlides model shop, 21 Streatham Hill Road, Streatham had a good cross section of the kits listed.

I think it would be wise to locate your kit soon because after the actual launch takes place they are sure to be as rare as hens teeth. Happy kit hunting.

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# KIT GOMMENT

# **CG-49 USS VINCENNES**

Manufacturer: Skywave/Pit

Road Scale: 1:700 Price: £14.99

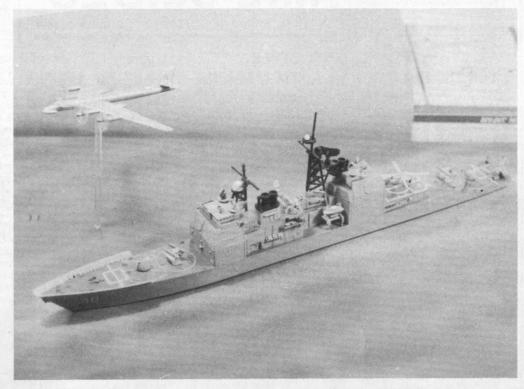
NO, modelfans, the price printed above is not a mis-print. The afficionados of 1:700 scale waterline ship models will no doubt even force a wince when they fork over no less than three fivers for this tiny ship model and receive only one thin penny in change.

Having got that off my chest, I can say that the kit is an excellent example of the craft of kit manufacture. For a long time the collectors of 1:700 waterline ship models have had no new products to build and Pit Road, a new name on the scene, acquired the Skywave moulds from that now defunct company and are busily producing a selection of modern warships to intrigue the waterline enthusiast. Obviously, the demand for these little items is not sufficient to warrant competitive pricing.

If you do watch the 'Nine O'Clock

If you do watch the 'Nine O'Clock News' then the USS Vincennes should tweak your memory banks to recognise the name that will ultimately take its place in the history books along side other infamous ships such as the SS Titanic. It is always of interest to us modellers to build a kit of a subject that figures in current events.

The kit itself is a good one and was virtually an evening's pursuit. The instruction sheet is printed in Japanese characters only but the clearly drawn staged drawings are sufficient to complete the model without any dif-



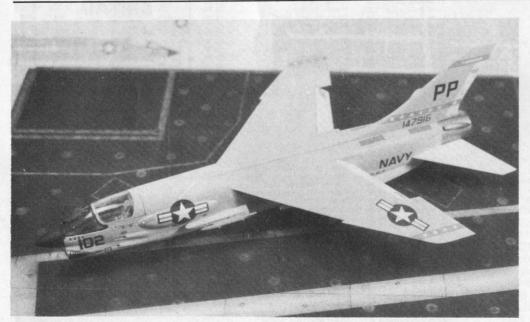
ficulties. The only hardship is the application of the many tiny coloured deck line transfers. I would recommend that instead of attempting to apply them as one piece as printed, you will save yourself a lot of grief by cut-

ting the circles into semi-circles first. That simple hint should save the average modeller an hour or so of serious frustration.

The model as photographed is not yet rigged, though in this small scale it

could be suggested that rigging is not visible, however I plan to do so. I included the 1:700th scale Soviet recceaircraft and perhaps the result could be titled: 'Beware, Bear'.

Jim Wood



# VOUGHT F-8H CRUSADER

Manufacturer: ESCI/ERTL

Scale: 1:72nd Price: £4.95

As the previously mentioned Corsair II kit, this recent offering from ESCI is released in three separate versions: the F-8E, the F-8E(FN) and the F-8H which is the subject of this review. I actually bought all three kits because of the terrific Cartograph decals that are always included in the ESCI releases and

perhaps in the future if my editor permits, I shall review all available Crusader kits. To begin with, this kit is another

well executed example of the kit manufacturer's art. It is a kit worthy of an expert because of its quality moulding and one that is suitable for the beginner due to its simplicity. The wing flaps are moulded separately and may be displayed either in the up or down position. Likewise the Crusader's unique variable incidence wing is included as a separate assembly

with a hydraulic actuator so that it too has the option of an up or down display position. This rather unorthodox feature was included as a design feature on the real aircraft to afford the pilot better visibility during carrier landing approaches. In spite of this novel design, the Crusader in service could not avoid the unfortunate appelation of 'The Ensign Killer'.

All parts were of clean fit and the actual time involved in construction was minimal. I enjoyed this process and when the time came around to paint it, I found that with just a tiny bit of rubb-

ing down the join lines, the model needed no filling.

The paint scheme is the basic USN Gull Grey over white but don't forget to paint the rudder white. The wing flaps and the tailplane are also overall white, so it is best to leave those parts off the model until the rest of the aircraft is completely painted. If you had taken the option to display the wing in the up position, it is handy to paint it separately as well.

As you can see in the photograph, I chose the VFP-63 scheme for it is one usually seen on the reconnaissance versions only. This is a good kit and I can't wait to start the other two ESCI Crusader kits.

J.W. Patterson

# DOUGLAS F3D-2 SKYNIGHT

Manufacturer: Matchbox Scale: 1:72

Price: £3.10

Well, US Naval aviation fans, Matchbox have done it again with the release of this second of two types in less than a year of models that should be most rewarding to all of you. The first was the T-2B/C Buckeye late last year and now the Skynight, a type that I personally never thought a manufacturer would have the wisdom to produce. It just goes to show that there are people out there in model land who are truly concerned with the needs and desires of the kit building public.

The box art by Roy Huxley is of the typical high quality that we have

come to expect from Mssrs Matchbox. When you open the box, and this is something I was shown how to do correctly only recently, by running your craft knife along the two side edges and one front edge of the top of the box. You have then made a lid which is now hinged at the back. This helps to keep all your parts contained in the box during construction. For years I've managed to impatiently tear open the box ends of my Matchbox kits, always wondering why it was necessary to remove all the contents before I started construction.

As a series 3 kit the Skynight is moulded in three colours in the usual Matchbox manner with an equally typical clearest of clear Matchbox canopy in three parts. This was done to capture the correct form of the bulges on both sides of the canopy which would have been impossible to mould in one piece. The parts are sharply formed and well engineered so that assembly is a piece of cake. This is a kit that is suitable for beginners as well as the more experienced modeller. I discovered no problems whatever during construction and the precision fit of all the components was a great aid in completing the model in a minimum of time.

The transfer sheet is a veritible work of art and includes complete

markings for two machines. One for an overall black US Marine night fighter of Korean War vintage and the other for a white/international orange US Navy Electronic Counter

Measure type of VF-121. The sheet is

brilliantly printed on the best decal paper in the world and it would be difficult to avoid building both versions. I did opt to build the white/orange version as shown in the photograph though if you wish

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to see a photo of the black version, it is featured in the review in last month's Scale Aircraft Modelling.

Well done Matchbox, we hope to see more of this creative thinking in your future releases. J.W. Patterson



# ISRAELI MERKAVA TANK

Manufacturer: ESCI/ERTL

Scale: 1:72nd Price: £1.75

ARMOUR buffs might have a tendency to look down their noses at 1:72nd scale armour kits in the same way that people who are committed to old black vinyl records dissaprove of compact discs. The latest series of armoured fighting vehicles and figures from ESCI could possibly inspire a new wave of enthusiasts that already have seen the waning of interest in the rather dated 1:76th scale.

I hope that mini-diatribe got your SEPTEMBER 1988 attention, because it was supposed to. I am sure that my own personal choice of scale in armour won't influence you one bit to alter your own, but ESCIs range of armour and accessories in 1:72nd scale continues to expand and leave less open space on my shelves

leave less open space on my shelves. I was very pleased to see this kit of the Merkava appear as it has always been high on my list of wants. This little jewel did not disappoint me at all when I opened the box. Every part is crisply moulded in a tan plastic and the kit simply falls together. As with most tank kits, it is a good idea to paint the bogey wheels in the basic colour, in this case khaki, and then paint the rubber portions either matt black or dark

matt grey. Also be sure and paint the hull side frames before you assemble the wheels and sprockets to them.

The camouflage net bin at the rear of the turret is the only really fiddely part of the construction and if you adept with the use of super glue, I would heartily recommend its use for this assembly.

this assembly.

Be sure to paint the tracks before attempting to add them to your model. These new hard plastic tracks that ESCI are now including in their tank kits are a welcome upgrade from the old soft PVC tracks that were once offered. As any old tank modeller can tell you, those soft thingies were very difficult to deal with. I don't think that

there was an adhesive in the world, or any other world, made to stick those diabolical tracks together. On the other hand, these new ones permit the modeller to display his tank with the tracks in any realistic position. Check out photographs of tanks in the field to see just how the tracks 'sit' on the vehicle. Instil your tracks carefully with superglue and finish the assembly of the tank. The transfer sheet included in the kit is excellent, however the instruction sheet unfortunately does not indicate where to place them. You'll have to check the reference books for the placement of markings.

In summary the ESCI Merkava is a faithful replica of an original tank design and at an affordable price.

Mark Panzer

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# Model reference

The Encyclopaedia of Military Models, by Charles Boileau, Huynh-Dinh Khuong and Thomas

THIS 200 page volume was originally published in France and has just been reprinted in English. It is a truly indispensable work for the kit builder or collector. Chock full of colour photographs, it lists every known plastic kit manufactured to date in the world's most popular scale.

most popular scale.

It is available in hardback at £16.95 or in soft cover at £11.95 from Airlife Publishing Ltd, 7 St Johns Hill, Shrewsbury SY1 1JE or your favourite bookseller.

SEPTEMBER 1988

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### McDONNELL F2H-3 BANSHEE

Manufacturer: Hobbycraft Scale: 1:72

Price: f4 99

The re-release of the Airfix kit of the Banshee at the same time as this new kit may seem to be ill-timed but the two kits really share only their names. This new offering from Hobbycraft is of the later version, the F2H-3, which saw service in the Royal Canadian Navy and differs substantially from the Airfix F2H-2. There were enough changes in the prototype to justify the designation being changed from the dash two to dash three with the most obvious cosmetic difference being the lengthened fuselage. There were power plant as well as other internal detail updates. The F2H-3 was also used by the US Navy and the transfer sheet reflects this.

Upon opening the box one finds a collection of very finely moulded parts that transcend the description of "Nice for a first effort". Every part is cleanly and crisply moulded and the panels are represented by finely etched lines. All the parts fit well and the model in the photograph was completed without the use of any filler or putty. It is an easy kit to build and I found that I had a little gem of a model to add to my seaborne aircraft collection in about five hours of work.

The only criticism I can level at this kit is the standard of the transfer sheet, on which is printed two sets of markings. One set is for a colourful version of the Royal Canadian Navy type and the other for an equally colourful version of the US Navy. The designs appear to have been printed from some rather poorly drawn art-



work and are not up to the high standard of the kit itself. I decided to paint my model as a US Navy type and used alternate transfers from the Scale-Master series of letters, numerals, and insignia. This series is available from Hannants and Mil-Slides mail order houses. If you decide to do the RCN version, a com-

plete set of markings is available on the rather better printed Tasman Model Decal sheet number V7205, also obtainable from the above mentioned sources.

An added bonus of this kit is that if you should desire to make the later type of Banshee, the F2H-4 used by the US Navy only, it is possible because the -3 is identical to the -4. It probably won't be long before Superscale (formerly Micro-scale) decals has a complete series of markings for this kit on the market.

J.W. Patterson

# LTV A-7E CORSAIR II

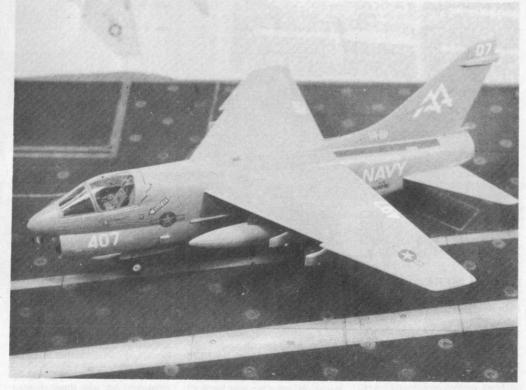
Manufacturer: ESCIERTL Scale: 1:72nd Price: £4.95

It was a welcome sight to see more ESCI kits on the shelves in my favourite hobby shops when I bought this new release. The Corsair II is a subject that is dear to me and even though it seems to have been well covered by most kit manufacturers, the prospect of a new approach to this old war horse intrigued me. I must say that this purchase did not disappoint me in the least. It is cleanly moulded in white coloured plastic with all the panel lines very finely engraved in typical ESCI fashion. The clear canopy is moulded in two separate pieces, with a gunsight reflector in-cluded, so that you may display your model with the canopy opened or

The construction is simple and straightforward and I encountered no problems whatever. As a matter of note though, this kit forms the basis of three recent ESCI releases and therefore has a degree of commonality with the other two: the A-7B, and the A-7D. This fact has introduced a slight glitch in the shape of an unrequired gun port on the right fuselage half. This port is present on the A-7B but not on the A-7D or E versions. You may choose to fill this with putty and rub down before painting for absolute accuracy.

The two colour schemes included are actually the simplest possible, an overall USN Light Gull Grey. One of the schemes has a tiny matt black antiglare panel and that can be brush

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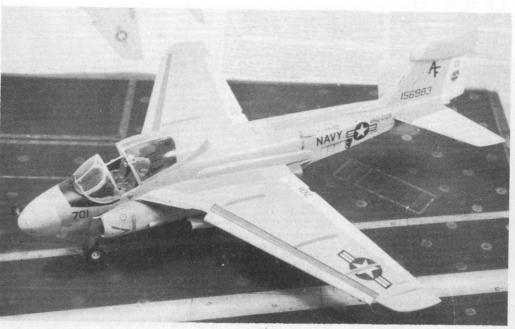


painted with the greatest of ease. The decals included are up to ESCIs usual excellent standard and they are often reason enough to purchase an ESCI kit of a type that has already been done by another company. The markings are for an aircraft of VA-25 (even

though the instruction sheet claims it to be VA-113!) and one of VA-81, the version I chose to build. A good choice of markings, one east coast squadron and one west coast.

Overall I would recommend this kit to modellers of all experience levels as it offers any of them something that they can all appreciate. It is also good value as it is mid-priced between the UK offerings and the more expensive Japanese alternative.

J.W. Patterson
SEPTEMBER 1988



# GRUMMAN EA-6A INTRUDER

Manufacturer: Fujumi Scale: 1:72nd Price: £7.99

The EA-6A Intruder electronic countermeasure aircraft (ECM) is a subject that had never had been tackled by a kit manufacturer in any scale in the past. Therefore Fujimi's 1:72nd scale kit is a very welcome arrival on the modelling scene. The kit itself is a product of the current trend in Fujimi's overall strategy to win the hearts and minds of the modelling fraternity at large, particularly those who enjoy modelling naval aircraft. They finally won me over with the release of this one. It wasn't bad

enough that I was eagerly awaiting the arrival of a complete set of Skyhawks that were correctly done, but the rendering of a miniature EA-6A ultimately forced my total capitulation.

Up until now, we plastic modellers, when put upon to model, a rare bird, had to either kit bash or rely on the cottage industry's collective, vivid imagination to provide us with the means to achieve a specific goal. They had not let us down in the case of the EA-6A, but the parts offered were expensive and difficult to find.

Fujimi's overall philiosophy to the manufacture of kits has helped us immensely in satisfying the curious needs of our modelling whims. When they

decide to attack a subject for a kit, they do it with a thouroughness that can only inspire admiration.

This effort is no exception and it is as complete and accurate a representation as even the most accomplished nit-picker could desire. I really find this kit difficult to criticise, so about all I can do is try and point the way to help avoid any problems that may creep into its construction.

To begin with, the assembly of the cockpit was a joy. I may comment that as the instruments are moulded in relief so that it is actually easier to paint that detail on a grey background than to use the enclosed transfers. Of course the alternate means would be to rub down all the instrument detail in order that the decal has a flat surface to

adhere to, but I found it much simpler merely to paint the detail on. When finished the cockpit is truly superdetailed.

After the fuselage halves are fastened together and you are to add the bottom pieces, one should take a great deal of care doing so. All the parts fit well but if you are prone to rushing things a bit, you probably would have to resort to sanding and filling at a later stage. Prudence at this point will save you that effort.

After the wings are mated to the fuselage assembly, the leading edge flap guide rails are prone to be broken off, so exercise caution while handling the model after this point. I would recommend leaving the leading edge flaps off the model and add them to the painted model after painting them separately.

The transfer sheet is a largish affair that, if offered as an accessory, you might expect to pay up to £3.50 for it alone. It offers a choice of four different aircraft and contains the only error I found in the kit. Ha, GOTCHA Fujimi-san! The 'CY for the USMC aircraft of VMAO-2 as shown in the first scheme is printed in black instead of white. The box art is correct while the instruction sheet also reflects this error. Sadly it is the most colourful scheme included, though if you just can't live without an EA-6A in this scheme, you can find the white 'CY' on a Micro A-6 sheet or if you have a spare Hasegawa EA-6B kit (Number K14X) lying around, it too has the required white letters.

That's not at all bad. In the end I have written a whole paragraph of criticism of a superb kit and all I've said is that the transfer sheet contained a mini-error. I hope it keeps Fujimi on their toes. As you may have already surmised, I highly recommend this kit and believe it a worthwhile addition to any modellers collection. Jim Wood

# HEINKEL He70F-2 He70G-1H e170A

Manufacturer: Matchbox Scale: 1:72

Price: £3.10

The Heinkel 70 was the German answer to the latest US designs of fast single engined transport aircraft that were beginning to appear in Europe during the early 1930s. This sleek, streamlined Ernst Heinkel product with its attractive elliptical wing has been said to have inspired the later most aesthetic British fighter, the legendary Spitfire. The He 70 was finally developed into a light bomber and versions saw limited use in the Spanish Civil War. Twenty further examples were produced as the He170A with the Gnome-Rhone 14 cylinder radial installed.

All three of the above mentioned versions are possible with this new and innovative Matchbox kit which contains a large well printed transfer sheet with three choices of colour schemes included. The kit is moulded in three different coloured plastic sections with optional clear canopies.

This kit is a departure from the now apparently obsolete Matchbox practise of deep trench-like panel lines that were so prevalent in past issues. The surface detail, which is represented by both raised and engraved lines is very good. The parts, including the various optional bits fit reasonably well and I managed to get by with a minimum

of filling. The lower wing join presented the only really marginal fit and that was easily overcome with just a bit of extra effort.

I didn't have any suitable reference drawings to check the overall accuracy of this kit, but if I did, I would suspect that if any problem was present it would be in the area of the canopy. When compared to photographs it appears to be a trifle undersized though not enough to warrant any modification. On the transport version the clear portion of the transfer sheet can be used as the windows in lieu of the included clear

parts if desired. This will save you the trouble of masking the windows off when painting.

The kit also contains complete interior parts and overall I would rate it as an excellent choice of subject and good value for money.

Simon Page



### PORSCHE 962

Manufacturer: Helle Scale: 1:43

Price: £1.99

AS this kit has been released in two identical versions with differing transfers, I shall review them both together. The Heller company is to be admired for producing plastic kits of car models in this popular collectors scale. Most followers of the plastic car scene adhere to the more prevalent

1:24th or 1:25th scale offerings. The true collectors scale is, however, 1:43! The only trouble is that the 'true collectors' have not yet discovered the advantages of the injection moulded plastic kits that are now on the market.

The 1:43 collector is a dogmatic soul that is accustomed to spending up to to the now rather dated lead alloy £25 per kit for a white metal version of the same type that would only cost him £2 in plastic. He has only just recognismodels. I suppose that it has something to do with the additional weight being linked to perceived value.

But I digress, these two Heller kits are little jewels. They are very accurate representations of the world's most successful racing machine. What's more, they are the easiest kits in the world to build at a price of about a tenth of their metal or resin counterparts. The manner in which you decide to paint them is probably going to

ed that resin kits are a valid alternative reflect the experience level of the modeller concerned, but if you require a tip, refer to the article earlier in this issue

Another tip I can offer if you should become 'hooked on Porsches', is that to increase the size of your collection you may purchase additional transfers for a variety of other machines from the following source: Grand Prix Models, 167 Watling Street, Radlett. Telephone 09276 2828. Tell them Franco sent you.



Manufacturer: Hasegawa Scale: 1:72nd Price: £3.49

When I first saw that Hasegawa had released a 1:72nd scale Abrams tank at about the same time that ESCI had, I was convinced that they were from the same mould. In the past, these two manufacturers had in fact shared some releases and this seemed a logical thought. Upon the subsequent purchase of the Hasegawa kit, I found that the two Abrams were not similar as they differed in design and engineering. This is the end may have to serve as some sort of selfjustification for spending the somewhat higher price of the Japanese offering. Curiosity killed the cat or at

least put a dent in his wallet. The M-1E1 differs from the earlier M-1 versions in that it has the German designed 120mm smooth bore gun of the NATO forces rather than the US 105mm rifled weapon. There are also some other detail changes that were included in this 1985 production version such as additional armour plating in the turret.

The construction of this kit is suitable for beginners. It is a simple task to finish this model at an evenings sitting. Even the paint scheme is only a two step affair. The bogeys are moulded integral with the suspension system are and it would be a good idea to paint the rubber portion of these wheels before adding the tracks. These are of the hard plastic variety and are best installed with the assistance of

I added an antenna made from 'stretched sprue' and was very pleased with my evenings work. This is a very good kit of an interesting modern AFV. I would like to add that the transfer sheet, while small is one of the most comprehensive I've seen included in a small scale armour kit. Good marks for Hasegawa on a well thought Mark Panzer





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# M60 A1 PATTON TANK Manufacturer: ESCI/ERTL

Scale: 172nd Price: £1.75

SINCE the M60 series tank was the backbone of US Army's armoured divisions for almost 25 years, it is surprising that so little attention has been devoted to it as a subject of plastic kits. ESCI's new release of the M60 A1 Patton is the beginning of a new series of Pattons that we shall see as the year continues. It is a welcome addition to the collections of those who like to possess our own personal histories

M46 in the late 1940s and was well printed. This is an excellent developed into the basic M60 design in little kit and the balance of this the late 1950s. It has served as the main battle tank of the US forces until the my now growing 1:72nd scale present time as it is gradually being armour collection. replaced in front line units with the M1

of armour in miniature.

Abrams turbine powered tank. An excellent source of reference for the Pattion is the Squadron/Signal Publications, Armour, Number 23.

The kit is simple to assemble though I found the bin at the back of the turret even more troublesome than the Merkava reviewed earlier. Exercise care in the assembly of this part and the rest of the kit goes together in a hurry. I painted mine in the colours as indicated on the instruction sheet, which incidentally, I'm sure by no coincidence are the same as the painting on the cover of the above mentioned reference book. The transfers are The Patton series began with the also for the same vehicle and are series will also be integrated into

Mark Panzer

SEPTEMBER 1988

Since the writing of this review, ESCI/ERTL have released two more Patton versions, include the M60 'Starship'. These new kits can form the basis of a mini collection of US Army tanks.

# by Phillip Greenwood

In British army terminology, an 'O' Group is a meeting of officers and soldiers to discuss the latest battlefield intelligence reports. With this first new issue of Airfix Magazine we are establishing this monthly column in order to keep you up to date with the latest information about new products for the military modeller from both the major companies and the cottage industries ADV Resins have had some

To begin Sovereign, well known for its high quality 1:35 resin armoured car kits are following up their recent Daimler MkI with a Humber Mk III. This is an all new kit with the master designed and made by George Moore. The Humber was widely used during World War 2 and for a long time afterwards. The possibilities for colours and markings are quite extensive.

K&K Castings will be releasing a 1:35 Sherman M-4A2 hull in resin. This is the late model with the 47 degree front plate and is designed to be used with the Italeri M-4A1 76(w) kit. The M-4A2 was used in large numbers by the Red Army during the last year of the war. K&K have several other kits in the pipeline and they will be reported in due course.

ED Models will soon be printing a selection of their 1:76th scale military transfers to 1:35 as the interest in the larger scale is growing.

After receiving some unfavourable reviews of their M-4 composite hull, Verlinden are reported to be making an improved master. This company will be releasing both the Sherman Mk Ic Firefly and the USMC M-4 'wading' with these new parts. Several other Sherman variants are said to be in the

problems in casting their Staghound Mk I armoured car kit. In 1:35 this is a large model as the prototype was almost as big as a Sherman tank. The Staghound should be of great interest to modellers devoted to British armour of the World War 2 period as it was produced exclusively for the British army. The price will be in the vicinity of £25, in keeping with comparative resin kits. On the horizon from ADV is the DUKW amphibious 23/3 ton truck, which achieved fame with its participation in the 'D' Day invasion of Europe. ESCI/ERTL are releasing their

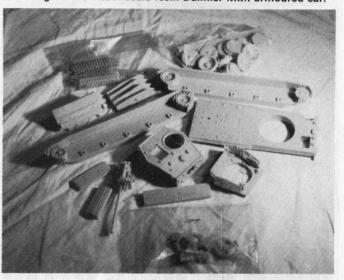
new 1:35 T-72 and T-74 Soviet MBT's. Russian armour has been neglected in the past so these two highly desirable choices should prove to be extremely popular.

Accurate Armour have a deserved reputation for producing high quality resin kits and their two most recent releases, the PzKfw 163 and the Challenger Mk I (17 pounder). have enjoyed a great success. Their Cromwell Mk IV is simply one of the best resin kits available. The fine surface detail has to be seen to be believed. This complete kit has seven large parts and over 50 smaller ones all cast with precision. The kit also contains a fully detailed turret

Miniature Armour Conversions 'early type' M4 Sherman hull with turret mated to its kit base.



Sovereign's fine 1:35th scale resin Daimler Mk.I armoured car.



Accurate Armour's 1:35th scale Cromwell Mk.IV resplendent with all its 57 parts

interior and contains excellent documentation. It really can be considered a bargain at £31. Derek Hansen of Accurate Armour will be tackling the CVR(T) Scorpion/ Scimitar next.

Miniature Armour Conversions are offering a resin 'early type' M-4 Sherman hull and turret conversion in 1:35. These parts are supplied to enable you to make a 'mid-production' Sherman of 1943 vintage using one of the currently available plastic Shermans as a basis. They cost £10.99 and £8.99

respectively.

To obtain any of the above speciality items, see the address list I have included

Accurate Armour, 14 Seath Avenue, Langbank, Strathclyde,

ED Models, 64 Stratford Road, Shirley, Solihull, B90 3LP

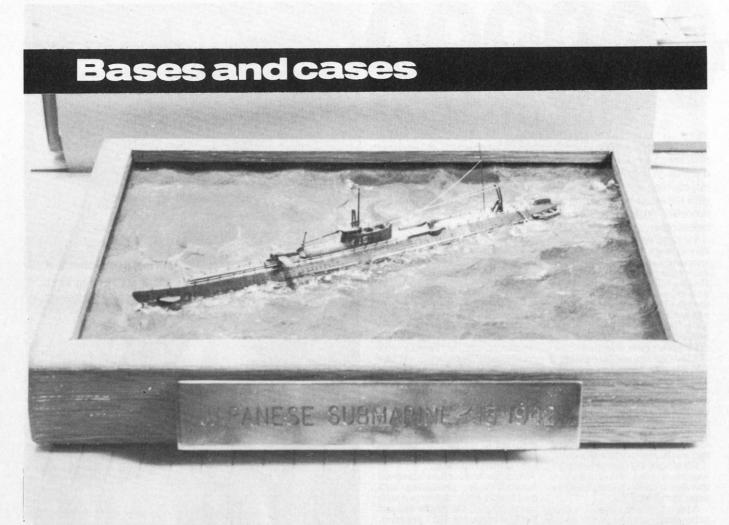
Verlinden, Historex Agents, 3 Castle Street, Dover, CT16 1QJ

Wings and Wheels, Mail Order Department, 21 Brampton Court Bowerhill, Melksham, Wilts, SN12

Mil Slides 106 Selsden Road. South Croydon, Surrey, CR2 6PF

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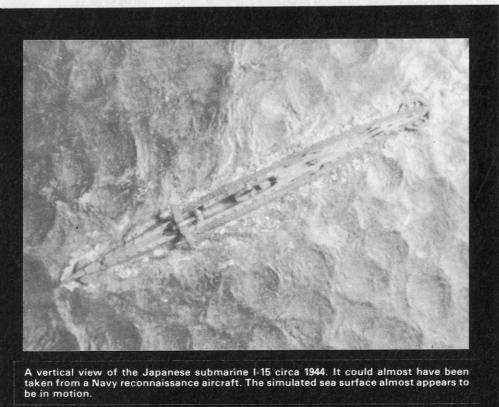


# SCENIC BASES FOR WATERLINE SHIPS

**Bruce Dennis** shows how to display nautical models in their proper element

DISPLAYING a small ship model in a simulated seascape or harbour can be very impressive and draw admiration from otherwise unimpressed viewers. Modellers can stamp individuality on their finished work by placing it in a unique setting chosen to bring out the character in the subject, or they can distract attention from an otherwise good model by using an indifferent or even bad method of display.

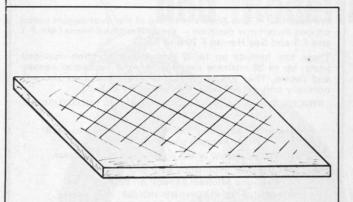
The most natural setting for a ship is in the water and we will now look at a few easy ways of achieving a realistic waterscape for your models with minimal effort and expense. I will now explain in detail the process which gives me most success, and despite the unorthodox approach, I assure you it is easy and surprisingly quick. Follow the steps below to achieve a unique method for showing off your best efforts.



Firstly, decide before you start work on the base which water effect you wish to depict. Maybe choose a harbour (still water), a calm sea, or a stormy ocean and then get an idea of what it really looks like. Look at photos of real ships of the type you are modelling. Huge rolling waves or hurricanes aren't really common despite Hollywood myths, so gently rolling waves or calm water is usually 'correct' and realistic

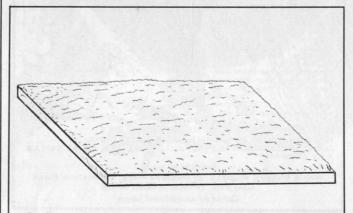
Decide the size of the base and how the ship will be positioned on it. Often a narrow base with the model centrally located suits the subject and the storage space available, but interest can be added by using a larger base and mounting the model at an angle. The decision is entirely yours, so place the ship's hull on a scrap of wood or card and try a few different poses. Decide on the position of the ship's wake, and if necessary sketch the arrangement.

Now that you have a good idea of what the finished effect will be, choose a piece of wood for the base and cut it to size. You can use ply, offcuts of a plank, or just about anything else that you are satisfied will not warp. I am partial to half inch chipboard or medium density fibreboard (MDF), but please yourself.



1. Score the base with criss-crossed lines to give the Polyfilla a 'key'.

Give the surface of the wood a 'key' by scoring lines in a cross-hatch pattern overall. Prepare some Polyfilla or similar product. Small tubs of pre-mixed Polyfilla are available but you can mix your own.

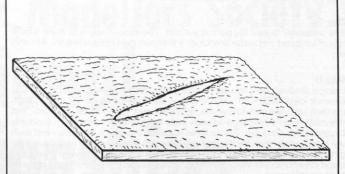


2. Cover the base completely with Polyfilla to a fairly constant thickness.

Spread Polyfilla evenly over the wood, ensuring that you work it into the scored surface. For best results put on one thin coat which will harden in an hour or so and then follow it with a thick layer of DAS Pronto (self-hardening modelling clay). It is this layer you will work on to get the water effect, so follow the next steps quickly before the DAS starts to harden.

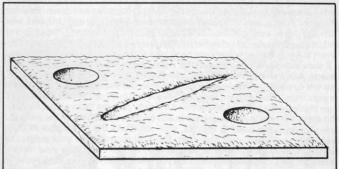
Tamp the top layer down lightly with a flat piece of plastic dampened to keep it from sticking. This gives you a flat uniform surface. If there are any major depressions or cracks, deal with these now. Appearance doesn't matter at this stage so don't be too concerned.

Place the hull of your ship on the soft DAS and press down, them remove. This will leave a perfect outline. Remove the soft DAS from the area marked by the hull and offer the ship to check its fit. This can be done before you begin construction of the model using just the kit hull, or with a completed model that that you wish to display in a new way.

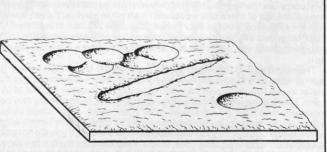


3. The base after the addition of the hull's impression.

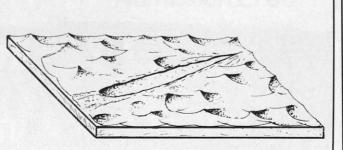
Now start to work on waves. These are formed by pressing a round object (such as a small toy ball) into the soft clay. Make several depressions of uniform depth around the base at random. Carry on, overlapping to avoid regular patterns, until you have covered the entire surface. The waves are now formed and should only need some attention to the inevitable cracks in the surface before the sealing is done. Dampen a finger and rub lightly across the cracks and any places where the clay was pulled away during pressing. You can add definition to the waves by gently pinching the peak of each edge until sharp. If you want a wake following your ship, use a dampened finger again and gently smooth the waves directly behind the ship. Only the largest ships would leave a completely flattened sea so use restraint



4. Add the first 'wave' impressions.



5. Continue to make the 'wave' impressions at random. overlapping as necessary



6. Hopefully, all your efforts should resemble this sketch.

Stage 9: Tidy up the cutout for the hull and allow to dry.

It is necessary to seal the porous surface. The easiest way is to make a 5050 mix of Unibond and water and brush a thin coat over the entire area. Allow to

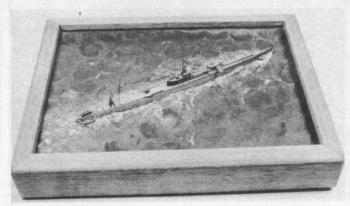
Stage 11:
Using a shallow dish, mix some dark green/blue acrylic paint (Tamiya IJN Green is ideal) 5050 with water and then stir in a little Unibond. About 20-25 per cent Unibond should give the right thickness. Using a tissue or cloth, dab this mixture quickly and generously onto the primed surface and it suddenly begins to look like a sea. Two or three coats like this will be necessary and each will look 'wetter' than the one before. Now dab a few drops of undiluted paint directly onto the lowest parts of the waves in the valley between crests and blend in with more of the gluey mixture. Your display stand will begin to come

Stage 12:
Offer the hull to the opening previously cut for it and ensure a good fit by carefully carving away any glue that has accumulated there. It is now time to permanently affix the hull in place. Superglue may be the best adhesive for this job while Unibond would do just as good a job although slower. Do not worry about a small gap around the ship; we will deal with it next. You have two choices: (a) a ship at anchor or dead in the water and (b) a ship under way.

(a) If your ship is to appear stationary in the water, try to keep the gap around the hull to a minimum. Run some of the paint/glue mixture into this gap until filled and allow to dry. If the gap re-appears as the glue settles or shrinks, just put more in and top up to the correct level. When satisfied, blend in to the surrounding area by diluting the mixture further with water and applying another coat or two to the whole surface. (b) A ship moving through the water leaves a wake behind it and disturbs the water at the bows and down the sides of the hull. This is easy to represent authentically with paint and Unibond. Mix some light grey acrylic paint (Tamiya IJN Grey) into some undiluted Unibond and fill the gap as described earlier using an expendable brush or cocktail stick. V/hen the gap is filled and shows no sign of shrinking or settling further, you will see a sharp contrast between the 'white' water and the previously painted greens. Add a small amount of the green used for the sea to the grey mixture, use this to paint the ship's wake directly onto the sea behind the hull. Avoid straight lines, dab it on sparingly with a tissue and build up the effect as you see how the first efforts dry. Just wait until it is firm, past the tacky stage, and you can apply the next layer. Each layer builds on the visual effect of the previous one and once the wake is formed, you can dilute the paint/glue mixture drastically and 'wash' on a final coat. Study photographs of your subject or similar ships and establish what kind (if any) of bow wave suits your model. These can vary considerably and once you know what you should reproduce, work from the bows back with the diluted grey/green glue mix. Avoid getting any on the model.

Finally let's give a bit of attention to the waves to finish the display off. Whitecaps (and perhaps a bit of the bow wave) can be portrayed easily by painting just the tips of only a few waves with matt white acrylics. Be very sparing with the white doing this as your realistic seascape will lose all subtlety if too much is applied. Highlighting the edges and tops of waves with a thin line of greygreenglue is very attractive and adds depth, but once again, do not over

There you have a complete guide to the seascape technique I favour. Experiment and vary to suit your own favourite methods. For example, you may prefer to use five-minute white wood glue such as Evostick instead of Unibond. These glues work as well and are quicker to set, but generally they cost more and may have no advantage other than speed. All of these various adhesives are generally available at your local DIY shop and the Tamiya acrylic paints can be obtained at most well supplied hobby shops. If you are not going to keep your model in a display case, keep it under cover for the first few days at least, as the 'gluey' surface is most susceptible to dust until it has cured. With practice, this technique can be developed to do more adventurous projects such as simulating stormy seas, beaches and shallow water. My experience is that the more dramatic effects are not only harder to make convincingly but can also distract from the model they are meant to enhance. By all means try modelling a hurricane if you want to but practice on the easier calm seas first.







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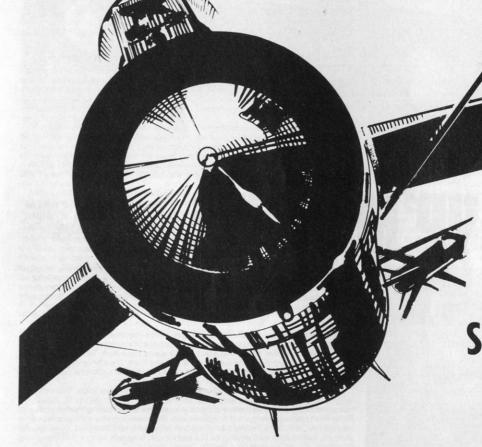
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# THE 'PICK-UP' MAC

The finished project makes a very impressive sight indeed, especially when displayed with a 1:24 car

# BY RICHARD PARKER

In my opinion, all the best truck kit conversions have a strong basis in practicality. Take the subject of this article for instance. It is a DAF 3300 6x4 artic with heavy duty crane arm fitted behind the cab. A vehicle of this type is used for 'self loading and unloading' 20ft or 30ft containers on and off the trailer at sites where permanent cranage isn't available or would cost too much to hire - for example once a week contract deliveries to a small firm on an industrial estate. With a flatbed trailer instead of a 'skeletal', the same truck could also move heavy machinery and components, unloading them easily at their destination. Although I've used a DAF 3300 for this article, the same idea applies equally well to any other European or American 6x4 or 6x2 ar-



With the jacks extended, the machine is ready for

# The Model

When it comes to 1:24th scale European truck kits, the only manufacturer is, of course, Italeri. Generally speaking, these kits are pretty good, but there are times when the real 'seeker after truck model realism' has to work hard when Italeri provide a part that - while it applies to some other truck in the DAF or Scania or whatever list - doesn't go with the replica supposedly in the box. Stick with me and you'll see what I mean.

Engine.

This needs careful assembly as there are very few locating points for all the turbocharger.

This needs careful assembly as there are very few locating points for all the turbocharger. and intercooler pipes. Painting is best done after the basic 'block' has been made up but before all the pipes are added. DAF engines are matt gold (two or three coats of Humbrol MetalCote gold left unpolished) with matt black radiator grille, matt black fan belt and slightly shiny black gearbox. The exhaust pipe is matt 'aluminium' (Humbrol 56) from the junction with the turbocharger onwards.

Careful assembly and even more careful painting is the order of the day here. For example, make up the rear axles and paint them, their springs, 'vee' shaped tie bars and the chassis before putting all these sub-assemblies together into one great piece. As provided, the kit

mably intended to represent a version only available in mainland Europe. Most 6x4 DAFs in the UK are 'heavy haulage' -i.e. over 50 tonnes - versions, with a shallow frame on top of the main chassis. Any modeller wanting this would have to provide the frame from scratch. As my model would only 'operate' up to the legal ordinary limit of 38 tonnes, I

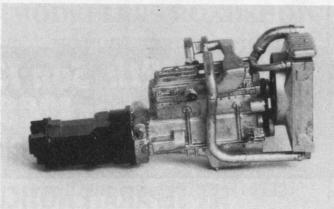
This comes from Italen's Truck Conversion Set, with some modifications. As provided, only one of the two telescopic sections extends. I supplied the missing length by cutting off the hook and end collar, fabricating a rectangular plastic beam from Tamiya square beam and replacing the hydraulic rams with Contrail Rod and Tube. The crane now extends properly (yes, a 'working' modell) The stabilizer feet had their ram sections replaced with greater diameter Tamiya rod and again 'work' properly.

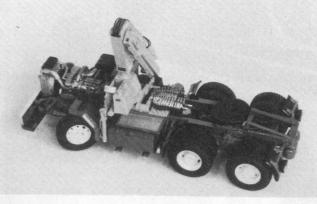
As anyone who has ever looked at one of these crane arms must know, there are long lengths of black flexible hydraulic hose linking each arm/hydraulic ram. Italeri provide some locating pegs for these and the others can be added by drilling shallow holes and fitting short protruding lengths of fine plastic rod. The hoses come from the spares box - in my case fine, soft, black Tamiya tube of the type provided in motorbike kits. I was actually given my tubing (two six foot lengths in a sachet with tweezers) so it might be available seperately. Try asking nicely at a friendly Tamiya stockist.

Once finished and painted (orange, with 'chrome' hydraulic rams - use Humbrol Silver

Fox 11 for all bright silver) the completed crane with shortened subframe goes on the DAF chassis over the gearbox.

The completed engine assembly after painting.





**Cab.**Several options here. Italeri do two versions - the 'Dutchman Supertruck' with a totally in several options here. Italien do two versions - the 'Dutchman Supertruck' with a totally in-appropriate (and never used on any Dutch DAFI've ever seen) 'pimple' air deflector. They also do a 'Spacecab' 3600 ATi which is perfect if the side air deflectors (parts 204 and 205) are left off. However, I used the sadly missed, deleted Revell DAF 2800 flat roofed cab. Apart from the roof, this kit was simply the Italeri model in a Revell box, with Revell instruc-tions and transfers. Just because it's now been deleted doesn't mean it might not be available somewhere. Keep an eye open for 'out-of-the-way' model shops, tourist resort 'gift shops', model shows etc. The same goes for any deleted kit you've set your heart on getting.

Inside the cab, the kit seats and top bunk are 'hollow' so they need backing with 15thou plastic card. The passenger seat should also have a headrest and armrests. The colours are 'light tan/imitation leather'. I used Humbrol 71 Oak for the trim panels, Humbrol 62 Leather buffed up to a nice sheen with a soft cloth for the bunks, seats and dashboard, and Coal Black for the floor, gear lever, steering wheel, door handles, grab handles etc. The parts of the doors and window surrounds not covered by trim panels are metal on the real truck, and remain in whatever basic colour DAF supplied the original cab. Sometimes this is startlingly different to the exterior colour scheme applied for the owner:-red interior metal with blue or green or black outside, for instance. However, one DAF colour is white and if you're using the Spacecab kit, which comes in white plastic, you can leave it that colour and save a paint job.

The floor is not an easy fit. The locating points at the back are ok but the one at the front is far too low. Remedy? Trim off the side lugs on the floor, glue the floor into the cab shell at the back, get a scrap of plastic card or roughly squared off sprue 3.5mm deep and trap it between the floor from lug and the top of the floor mounting point on the cab shell front panel. This lifts the front of the floor inside the cab, the dashboard is now visible from out-side the windscreen and the whole cab sits properly on the chassis, meeting the bumper and tilting properly.

Before adding my cab roof, I fitted curtains over the side and rear windows (lengths of dark red 'bias binding' sewing tape secured along their top edges with UHU glue) while the 'stickers' go on later from outside. The colour scheme on any truck model is vitally imporstickers go on later from outside. The colour scheme on any truck model is vitally important, and in this case it was carefully designed to exploit all the exterior trim panels and changes of shape to give the cab a clean, bright, attractive but slightly aggressive look tough, reliable and capable! The sort of image any owner/operator or small fleet should go for. Gloss bright red up to the top of the wheel arch/cab steps (to match the bright red chassis) then bright yellow up to the waistline 'belt' moulding and ivory (Humbrol 41) above that. The cab back is yellow and there is a vertical yellow "wraparound' stripe behind above that. The cab back is yellow and there is a vertical yellow "wraparound" stripe benind the cab side windows. Both front grille panels are red. To paint black plastic red, first apply two or three coats of satin white. The actual moulded grid grille squares are carefully touched in with matt black when the red has thoroughly dried. The cab steps, normally matt aluminium, are satin black. The chassis is decorated with a yellow front bumper and ivory

All the best truck kits need at least some of these. At the rear of the chassis, running from the top of the rear cross member to the edge of the 'fifth wheel' coupling plate are the vitally important 'hitch-up' ramps. As the truck reverses under a trailer during coupling up - both in real life and on the model - these ramps lift the front edge of the trailer so it can slide onto the 'fifth wheel'. There are a number of ways of making these - Plastruct, short lengths of brass beam etc, but I used strips of 20thou plastic card glued to make a 'T' shaped girder and supported at the 'fifth wheel' by a spare cross member from another kit,
Airlines/electrical lead. Again something no model must be without. British trucks have

three airlines - red, blue and yellow. European rigs, as well as newer British ones, have the two line system - red and vellow. Luse the coloured inner wires from four core ty aerial wire coiled round a needlefile (the round, untapered section meant to go into a wooden handle, but any % in diameter rod would do). The connecting valves can be made from tiny lengths of narrow aluminium tube secured with superglue. The black electrical lead is made the same way but coiled round a pin to give tighter curls. All four were then secured to the rear cross member of the crane sub frame.



The deck plate was made from a scratchbuilt plastic card frame and two rectangles of metal mesh cut from a frying pan splash guard (try your local hardware shop for this -usually cheaper than a specialist kitchen equipment retailer!). Once the frame is painted, the

mesh can be attached with epoxy, superglue or even UHU.

The roof signboard is to be found in the Italeri Truck Accessories Set (along with loads of other useful items). As moulded, it is meant for a Mercedes Benz, but by the time the base has been carved and filed flat, it is exactly 'DAF' sized. From there it is just a matter of carefully cutting shallow grooves for any roof ribs. And the window 'stickers'? All transfers, applied on the outside right now. Most are to be found in the Accessories Set sheet, while the 'GB' and other country indication items come with the kit. And that, as they say, is that. Finished. One very smart, very effective looking truck. Not an everyday sight on the roads but not unknown either. As a kit conversion it is also slightly rare, but easy enough to 'personalise'. If you don't want a DAF, how about a Scania with crane arm, or a Freightliner, or a Kenworth? Also, if it looks expensive, well all the materials needed -Conversion Set, Accessories Set etc - have enough parts or materials left over to improve several more trucks. So why not have a go?





# BACKTO BASICS

# **JOINT LINES AND RUBBING DOWN**

Following the new Airfix Magazine's intended objective of trying to help the younger or less experienced modeller I have gone right back to basics for this first article and will be dealing with the elementary subject of rubbing down joint lines and the materials most suitably available for this task.

Alan W. Hall

It is surprising that there are many younger modellers who rarely take the trouble to clean up a model before painting and as this is a relatively simple task but one that is important to getting a satisfactory end result I feel that some emphasis ought to be laid on the subject and methods used explained in some detail.

With the accuracy of present day mould makers, particularly in Japan, there is often little need to rub down a joint line but there's always the older kit and more often than not the Japanese ones can do with some minor adjustments here and there if perfection is the aim.

As the filling comes before rubbing down I will deal with the methods I use in this connection. It must always be stressed in

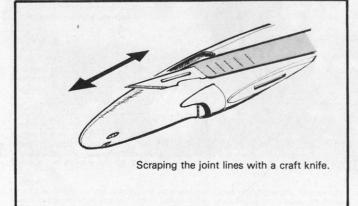
these articles that the methods given are those used by the author and ones which he has found to be successful. There will probably be other methods and ideas available but to list them all would probably become boring and counter productive.

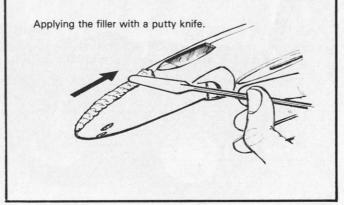
Way back before plastic modelling really took off the scale modeller had little choice of filler apart from what was called 'plastic wood'. This was usually a mixture of fine sawdust and an adhesive which when dry formed a hard finish suitable for sanding but had the disadvantage that it could not be used for anything other than rather large areas. Modellers needed something better than this and the Americans can claim to be the rightful originators of fillers as we know them today. They found that materials used

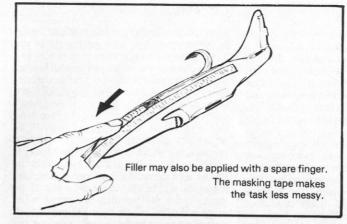
for customising cars and for filling small holes and dents in metal surfaces were ideal for modelling as well. The name Creenstuff came into prominence as being one of the first and I remember buying a giant tube of this material in Toronto, Canada in the early 1960s at a price that would stagger the present day modeller because it was so cheap. My original tube was less than the combined price of a dozen present day smaller sized tubes!

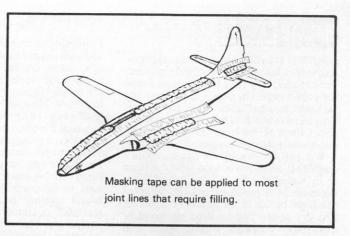
But Creenstuff did the job and it was soon found that the smallest imperfection in the model's surface could be patched up with this material. It dried quickly, went really hard and could be rubbed down with wet and dry paper easily.

But Creenstuff had the disadvantage, as









did all other early fillers for the model trade of attacking the plastic if used in any large quantity. I remember trying to fill the inside of an early vacuform model that defied my attention because the moulding had drawn so thinly that I needed to reinforce the thinnest parts. The result was a crumpled mess when I came to look at it the following morning. This then is the first tip. Watch out that the filler you buy can be used for either large or small areas of filling. otherwise you will be in a bad mood for the rest of the week! Most contemporary materials recognise the problem and the chemical formula has been modified to take this into account.

### **VARIOUS MATERIALS**

The market for fillers has obviously grown over the years as modellers have become more sophisticated in their work and standards have progressed. In the main they can be divided into two types: the two-part mixture and the straight-out-of-the-tube variety. Again generally speaking the latter are made and marketed by such well known names as Revell, Humbrol and the ubiquitous Creenstuff though now marketed by one of the US direct mail suppliers. The two-part mix has centred round a material called Milliput though doubtless there are others that do the job equally as well.

I find that the tool box ought to contain both. The Milliput can be used for small filling jobs but is wasteful as it has to be premixed before application, the tube variety can be used in very small amounts and applied exactly where needed without waste. Both have their practical uses as I am sure you can see.

Personally I prefer the Revell variety of the tube offerings as this seems to dry harder and has a finer texture than any of the others I have tried. Milliput is almost universal so the choice is narrower.

How is filler applied? here personal choice is a deciding factor but I find that my old paper knife that has been in the family for generations is the best sort of tool as it has a fine tip and is flexible enough. Cut down knives from the kitchen, spatulas from other sources and even finger application are all methods than can be used. The object is to get the minimum amount of filler into the right place and sufficient to fill the crack or uneven surface as necessasry. Apply too much and it takes a long time to dry and an equally long time to rub down with the possibility that more surface detail will be removed than necessary in the process.

It is essential to let whatever filler you are using dry out properly. When applied in small quantities the drying time is possibly one to two hours but if a thicker layer is needed it is always adviseable to allow this an overnight curing time before attempting the rubbing down process. Joint lines where the obvious need for filler can be applied need to be filled carefully. Too much filler and the area around the joint line will lose all panel line or rivet detail when you come to clean up. A method often used is to stick masking tape over the sensitive detail so that filler cannot touch it. Rubbing down afterwards can be conducted with the tape in place and the detail thus preserved.

### CLEANING UP

The most obvious place for cleaning up operations is the joint line that appears on the top line of the fuselage when dealing with an aircraft model. At the same time the joint between the wings and fuselage often gives a problem and there may be other points such as the addition of accessories and underwing stores that leave an ugly gap unless something is done about them.

In the case of a fuselage joint line I often start by scraping down the offending dissimilarity with a knife blade held at right angles to the surface. A Stanley knife blade is the best for this as it is strong and sharp enough to do the job quickly. But you will certainly lose the surface detail if you are not careful and I always do the minimum in this instance. In any case the knife blade will only remove the most obvious discrepancies and if not used with care can also make indentations in the plastic surface that will in themselves have to be scraped down at some later stage.

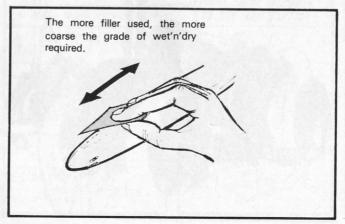
It is at this stage that the filler is applied to the main points needed cleaning up and also to the smaller ones such as the dimples left by the moulding process. The model may look something of a mess at this juncture as the scraping and filling can distract from the neat lines that the model had originally. But not to worry for the subsequent cleaning up will remove all those rough surfaces and return the fuselage and wings to their pristine shape without any of the ugly joint lines left by the earlier construction work.

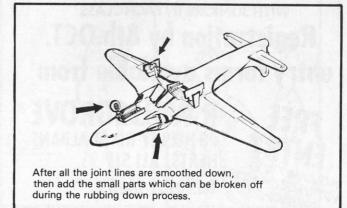
Once again a word of warning about leaving the filler to dry out thoroughly for there's many a time I have been impatient and started rubbing down only to find the undersurface still unhardened and an even worse mes result. If this happens stop immediately and leave the model to dry out thoroughly followed by a further application of filler in small quantities to patch up.

### **ABBRASIVES**

In the days of plastic wood we used various grades of fine sandpaper but since then the invention of plastic fillers such as Greenstuff or Milliput the use of wet and dry paper has become almost universal as far as the plastic modeller is concerned. But believe it or not I have met modellers who have in all innocence asked me what wet and dry paper is and where they can buy some.

There are in my experience about five grades of wet and dry paper which can be





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# BACKTO BASICS

purchased at almost all ironmongers shops. Ask to see what they have available and select three grades, very fine, medium and coarse for your work. The sheets cost about 70p each and measure about 12 inches square. They all have numbers but I would not worry about these at the beginners stage, you'll know what you want immediately you see it.

Wet and dry has, as the name implies a double action. It can be used wet by soaking it in water or dry as the requirement demands. Most people use the wet method as this is the best as far as plastic is concerned. The dry action can be used on wood or absorbant surfaces where water will otherwise damage the base material.

I keep an old pudding plate in which I have a ready supply of water. This plate also gets used for soaking water slide transfers as well, but that's another story. Cut the wet and dry paper into strips say two inches wide depending on the nature of the work you want to do. Immerse these one at a time in the water and then use a gentle rubbing down action on the filler or plastic you intend to work on. The wet and dry paper will produce a paste which is in effect the material you are cutting away with the rubbing down action. Occasionally this can be wiped away with a piece of old rag or a paper tissue to keep the model clean up operation. The water in the paste soon evaporates in the warmth of the workshop and although you have wiped most of it away with the rag there is always a residue which I remove, especially before painting, with a large soft paint brush flicked over the surface.

### **ALTERNATIVES**

Depending on the amount of filler being used you may require some rough action to get a new shape carefully completed. In this instance the Stanley knife blade can be used for rough shaping but files are also often necessary. The joint line between a wing and fuselage can be a problem in instances of this nature as it is often too small to get the finger in and even though you may roll up the wet and dry paper into a cylinder shape the sharp angles that may be required eludce even the finest rubbing down. Files can frequently be used to complete this operation but I've found another tool which has become standard equipment in most modellers equipment. This is the Flexifile. Again an American invention it is imported into England by Aeroclub Models of Silverwood Avenue, Ravenshead, Nottingham NG15 9BU and costs 3.95 complete with spare sanding strips. The refills are 99p per pack.

Flexifile is such a simple invention it is surprising that nobody thought about it before a couple of years ago when the first ones came on the market. It consists of a 'U' shaped piece of flexible metal the arms of which have a thin strip of sanding down material stretched between them. It is ideal for reaching into those difficult places that the ordinary wt and dry paper cannot reach. Nowadays I wonder how I managed without it before I bought my first one. It can be used wet or dry (I prefer the latter) and will help to reshape curved surfaces that the conventional methods tend to flatten. The expense will not hurt your pocket all that much and you will bless this invaluable tool

### FINISHING

Many inexperienced modellers will naturally be entirely satisfied with getting rid of the most important joint lines in a model but those of us who wish to go just that bit further should be advised to apply a paint undercoat to the model of a mid-grey colour or some other neutral shade which will show up any discrepancies after it has dried. Failure to do this will result in the same scratch or imperfect cleaning up marks showing through the paint job when the model is complete. A quick check can be to hold the model up against the light and at a certain angle you will be able to see the worst of the marks but a pre-painting undercoat is the most revealling if you have the patience to wait until this has dried and carry out the cleaning uo operation all over again in the imperfect parts that show up.

Filling and cleaning up the joint lines of any model show to the viewer just how careful you are in your work and you will have the satisfaction of knowing that the surface detail and the painting thereon are as perfect as your own abilities can accomplish.

In the first instance you may take away a lot of this surface detail but this is better than having a dark line along the top or underside of the fuselage where the joint has not been eliminated. I'll say more about the rescribing of surface detail at a later stage. Sufficient for the moment to encourage anyone who has not long been at plastic modelling to achieve a slightly higher standard and get started on the long hard trail of experience that leads to winning international competitions.

**International Plastic Modellers Society** are holding an



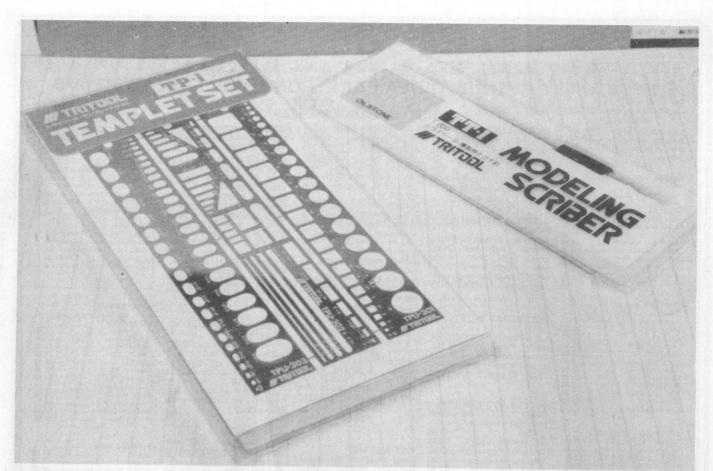
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# MODEL **PRODUCT** REVIEW

Product: Scribing tool and

Manufacturer: TRIMASTER Price: Tool, 6.50: Templates. 5 50

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THIS is the first of many such reviews that we shall be printing of new products that may help to improve the standard of modelling skills. Trimaster is a name to be reckoned with in the hobby these days. Their new 1:48 scale series of high-tech multi-media kits have no

The first products that they had on the market were not in fact plastic kits but these handy tools. If you are ever in the position of having rubbed down a join line on one of your latest models and then discovered that some of the scribed panel lines have vanished in the process, your resulting frustration can now be overcome with these new tools. The scriber comes equipped with its own oilstone so that you can maintain its sharp point. The two templates, TP-1 and TP-2, offer a variety of shapes and curves used in combination with each other can restore most lost detail. They can also help you to relocate any panels that may be moulded in incorrect positions.

They are of course an invaluable aid to the scratch builder as well. My favourite use is to sand down raised panel lines, which are my own pet peeve, and rescribe the same lines to an engraved state.

They are not cheap but are definitely a must for those who strive to improve their skills.

This illustrates the TT-1 scribing tool and the TP-1 template, approximately actual size. Note the variety of panel shapes and sizes which can be used on models of practically any scale.



This kit contains parts for one ladder used on all Flogger types, as well as on most oth modern combat types. Full assembly instructions are included. Also many aerials, senso and probes suitable for use on many Soviet aircraft types. Designed by Gabor Szekere:

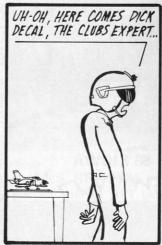
AC709 Two F-4 Phantom In Flight Refuelling Probes £2.20 This kit contains parts for two IFR probes for this widely used aircraft. Etched and car white metal parts and full assembly instructions are included.

AC710 Soviet Aircraft Chocks, plus detail parts £1.85

This kit contains parts for three pairs of Soviet wheel chocks in differing styles, suitable for use with most MiG, Sukhoi and other Soviet types. Also included many detail parts including ILS, IFF, VHF aerials, probes and others. Designed by Gabor Szekeres.

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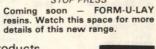
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48 RAF: Jaguar GR. 141 Sqn. 1977, Jaguar GR. 120 Sqn. 1977, JASDF F-4E/J Phantom 301 or 302 Sqns. L'Armee de l'Air F-84F Thunderstreak E.C. 1/19 1961. Dutch A/F F/TF/RF-104G Starfighter, choice from either 306 Sqn. 311 Sqn. V1bVKL or 'Dutch Masters'.

45 IAT 1977(1). RAF: Lightning F.3 or F.6 11 Sqn., Hawk T.1 CFS. Armee de l'Air Mirage F.1 c E.C.1/12. Norwegian A/F F-5A 'Jokers' 336 Sqn., Australian Navy Sea King HAS.50 817 Sqn.

6 Hoyal Navy (Falklands) April-Sept 1982: FRS.1 Sea Harriers 800, 801, 899 Sqns. all finished in E.D.S. Grey schemes. One complete a/c can be modelled from a 14 a/c selection. Sea King HC.4 846 Sqn. 1980-82 or as on return from Falklands. RAF Lightning F.6 5 Sqn. or 11 Sqn. 1982 both in three-tone grey finish. Additional decals provided for a 5 Sqn. grey/green Lightning F.6 as an alternative to the 11 Sqn a/c on set 45.
Royal Navy (Falklands) April-Sept 1982: FRS.1 Sea Harriers 809, 899 Sqns. all finished in Medium Grey schemes. One complete a/c can be modelled from an 11 a/c selection. RAF: Tornado GR.1 9 Sqn. or TWCU 1982. Puma HC.1 33 Sqn. 1980 or 230 Sqn. or 240 OCU 1982.

1982. \*\*.
188 L'Armee de l'Air: MD450 Ouragan 2nd/4th Escadres de Chasse 4 ATAF 1953-55. An a/c from any one of eight units can be modelled. T-28A Fennec (Trojan) 1960, any one of five units. Alouette III F-MJBP Detachment d'Helicopteres de la Gendarmerie 1981.
189 L'Armee de l'Air: F-100D/F Super Sabres 3rd and 11th Escadres 1960-78, 7 units represented. Mirage F.1B/C 5th, 10th, 12th, 30th Escadres 1976-82. Aeronavale Vought F-8E(FN) Crusader 12th, 14th Flotille 1964-83.
70 RAF: Vuclan B. 2/B. 2A, all a/c finished in anti-flash white: 9 Sqn. 83 Sqn. 12 Sqn. 35 Sqn. all in 1963, 27 Sqn. 1962 230 OCU 1963. Tornado GR.1 617 Sqn. or ASF 1982-3. Lightning T.4 74 Sqn. 1965. Royal Navy Sea Harrier FRS.1's 800, 801, 809 Sqns. represented 1982-3. 71 RAF: Vulcan B. 2/B. 2A, all a/c camouflaged: XM597 101 Sqn. and 'Black Buck' ops, 1982-3, 50 Sqn. 1982-3, 35 Sqn. 1976, 617 Sqn. 1979, 27 Sqn. 1977, 35 Sqn. 1977, 230 OCU 1980, 9 Sqn. Sea King HAR.3 202 Sqn. 1982. Royal Navy Sea Harrier FRS.1 809 Sqn. 1982.

MODELDECAL DECALS

1:72nd SCALE

72 A&AEE Phantom FG.1 XT597 July 1983, as displayed in special Phantom 25th anniversary markings at the IAT. RAF: Phantom FG.1 111 Sqn. July 1983 as at IAT. Victor K.2 55 Sqn. or 57 Sqn. 1983. [Oark blue and red phoenix emblems also included as option for 57 Sqn. machine.] All finished in hemp scheme.

ABABE Phantom (S. 1 XT597 July 1983, as displayed in special Phantom 25th anniversary markings as at 14.7 (150 K. 2.5 Sqn. 1984). The Armstring Sqn. 1984 and 14.7 Sqn. 1984 as at 14.7 (150 K. 2.5 Sqn. 1984). The Armstring Sqn. 1984 and 14.7 Sqn. 1984 as at 14.7 (150 K. 2.5 Sqn. 1984). The Armstring Sqn. 1984 and 14.7 Sqn

with dark sea green overain upper surfaces, or X736 4 3qfn. With dark sea grey overain upper surfaces, 1984.

79 'Raspberry Ripples' all. Dakota C.3 ZA947 RAE Farnborough, as at the IAT July 1985, in special Dakota 50th Anniversary Scheme. Alternatively may be finished in normal everyday scheme. Hunter T.7 choice between XL563 RAF Institute of Aviation Medicine 1982 or XF321 RAE Bedford 1980. Gazelle HT.2 XZ936 ETPS 1983-85.

80 RAF: Tornado GR.1 14 Sqn. or 17 Sqn. 1985. Hawk T.1/T.1A's in grey schemes 1984-85, choice from the following options: 1 TWU Brawdy 79 Sqn. or 234 Sqn., or 2 TWU Chivenor 63 Sqn. or 151 Sqn. Hawk T.1 ETPS 1986 in 'Raspberry Ripple' finish. Set also includes final unit emblems as applied to Harrier GR.3's of No.1453 Flt. Falklands, 1984.

81 British WW2 dull red letters and numerals for standard 48 in. high by 24 in. wide by 6 in. stroke squadron codes, Intended primarily for large and some medium-sized aircraft.

82 British WW2 dull red letters in commonly used 48 in. high by 30 in. wide by 6 in. stroke squadron codes, for large and some medium-sized aircraft.

83 British WW2 dull red 48 in. high by 30 in. wide by 6 in. stroke numerals for use with set 82. Also includes complete alphabets and numeral blocks for standard 8 in. high serial numbering, in various styles.

numbering, in various styles.

84 British WW2 dull red 36 in. high by 4 ½ in. and 6 in. stroke letters and numerals. Frequently used for squadron codes on medium-sized aircraft, and sometimes on the larger types.

85 RAF: Wyton-based (Canberras, choice between E.15 100 Sqn. Sept/83, T.4 231 OCU July/83, T.17 360 Sqn. Sept/85, PR.9 1 PRU 1985, Italian Air Force Starfighters, choice from F/RF-104G's of 3rd Stormo, and F-104S machines of 5th (Fairford 1985), 9th, and 53rd Stormo.

Starfighter, choice from either 306 Sqn. 311 Sqn. V1bVKL or 'Dutch Masters'.

8 Lat 1977/11. RAF: Lightming F3 or 6 11 Sqn., Hawk 1 1 CFS, Armee de F4 Mirage F1. It Sqn. 1986 Sqn. Asstralan Navy See King HAS.50 817 12. Novembers 23 or 5 Sqn. Asstralan Navy See King HAS.50 817 12. Novembers 23 Sqn. Asstralan Navy See King HAS.50 817 12. Novembers 24 Sqn. 1978 Sqn. 37 Sqn. 1986 Sqn. 3rd Wing, L'Armee de F4 Sqn. 233 CVL Jaguer GR. 122 SQn. Use Biglian Af F Hrigage B4. 8 Sqn. 3rd Wing, L'Armee de F4 Sqn. 1986 Sqn. 3rd Sqn.

at Fairford in 1987.

33 RAF Meteor night fighters selection, NF.14 33 Sqn. 1958, NF.11 87 Sqn. ca.1956, NF.11 95 Sqn. ca.1956, NF.11 125 Sqn. 1955, NF.11 141 Sqn. ca.1952, NF.11 151 Sqn. 1954, NF.12 152 Sqn. 1958, NF.11 256 Sqn. 1958, NF.13 219 Sqn. 1954, NF.12 264 Sqn. 1957, NF.14 264 Sqn. 1955, NF.11 264 Sqn. 1954, RAF Hawk T.1, XX172 or XX238 in 1987 CFS display scheme with Union Jack tail

34 RAF: Phantom FGR.2s, 6, 14, 17, 31 Sqns., late sixties to mid-seventies period. Lightning F.2A, 19 Sqn. 1969 and 1972, 92 Sqn. 1972/3. Harrier GR.3 XV738 'B' 4 Sqn. 1987, fin marking, code letters and crew name only, as an update to set 74. Tornado F.3 ZE292/CA 5 Sqn. 1988, Squadron markings and rank pennant only, intended as an update to set 90.

Note: To allow the maximum number of squadron options, many of our sets do not include roundels, fin flashing and serial numbering. The two former are intended to come from the kits or Modeldecal sets 47 and 54, and the latter from sets 33, 34, 35, 36A and 48, all as appropriate.

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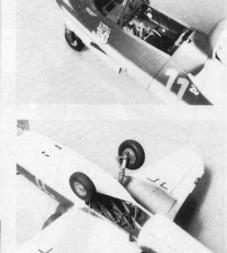
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### MA3 He.162 SALAMANDER f24.95

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